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ORIGINAL LECTURES.

BLACK CATARACT.

A Clinical Lecture delivered before the School of Ophthalmology, at the Central Dispensary, Washington, D. C.

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GENTLEMEN: While it is our main purpose in these clinical lectures to bring before you the commoner forms of eye-disease, such as you will be most likely to meet with in the ordinary routine of your practice, we shall not allow to pass by unnoticed some of the rarer forms of ophthalmic affections, particularly those in which the diagnosis presents points of difficulty. In ophthalmology, as in internal medicine and general surgery, correct diagnosis lies at the basis of successful therapeutics, and the close study of the differential diagnosis of the various affections of those parts of the organ of vision open to inspection by the naked eye, will be of much greater value to you in these preliminary studies than watching the most skilfully performed extraction of cataract.

But the diagnosis of cataract should be a matter of great interest to you, even though you may never make an attempt to operate for one. It is a common practice—and a very good one—for patients to apply to their family physician whenever they have any trouble with their eyes, in order that he may direct them where to go in case he does not consider himself competent to treat it. Should one of your patients so apply to you, it would be very humiliating, if you had diagnosticated a cataract, to have the ophthalmologist to whom you referred him find an atrophy of the optic nerve, or glaucoma. This a common experience at this clinic. Patients have been sent here by physicians, having made all their arrangements to remain for an operation, no doubt existing in the mind of either physician or patient that it was a case of cataract, and that at the end of two weeks the patient would return home restored to sight. It is not a pleasant thing to have to tell these poor people that their physician was mistaken—that their lenses are perfectly clear, and that an operation cannot bring their sight back to them.

And, generally, the existence of cataract is readily determined; so readily, in fact, that most intelligent laymen know, from the appearance of the pupil, when the lens is opaque. At a distance of many feet the white appearance of the ordinarily black pupil proclaims the presence of cataract. Not, however, that all white spots on the "black of the eye" are cataracts. Mistakes in this particular are, perhaps, more frequent than of the opposite kind. A great many people, and, I am sorry to say, some physicians, regard any white opacity on the anterior part of the eyeball as a cataract.

The diagnosis of cataract is, as already stated, under ordinary circumstances, a matter of no difficulty whatever. A simple inspection will show at once a whitish opaque substance occupying the pupillary space behind the iris. This is particularly the case in children and younger adults affected with cataract and with the traumatic form, where the opaque lens is almost white, reflecting as it does nearly all the light that falls upon it. The softer the lens substance—that is, the more water it contains—the more heterogeneous and less compact are its particles, and the more light it throws back, just as the fine crystals of snow held loosely together are whiter than the compact ice.

All cataracts, however, are not soft and white, and in proportion as they become denser they reflect less and less light and the whitish appearance is less and less marked. For the diagnosis of cataracts such as these, a simple inspection will not always suffice, but recourse must be had to an illumination of the pupil by the concentration on it by means of a convex lens of two or three inches focus, of the light of a flame placed to the side of the eye. This method is usually known as "oblique illumination" or "examination by the oblique light." Under the examination any irregularity in the density of the lens generally reveals itself very readily as whitish or grayish spots or lines on the black background. In making this examination, there is one error to be guarded against, into which the inexperienced is very likely to fall. In persons advanced in life the pupillary space under the oblique illumination is not black, but greenish-gray, quite a sea-green in some cases, resembling, I fancy, somewhat the appearances the older writers meant in their descriptions of "glaucoma." This change in the aspect of the pupil does not always, in fact, very seldom, mean any great loss of transparency, as an examination with the ophthalmoscopic mirror will show at a glance. It signifies a certain amount of condensation or sclerosis of the lens-fibres which may be considered as a kind of natural evolution on the part of the tissue in common with the changes in other parts of the body due to advancing age. Its peculiarity is that it is perfectly even, in contradistinction to the opacity of cataract proper, where the opacity is, in the incipient stage, irregular, and whitish with no tinge of green. To make, however, assurance doubly sure, the diagnosis should not be considered as absolutely final until the ophthalmoscope is used. If there are any opacities in the lens, these will show themselves as black spots or lines on a reddish ground, when the light is thrown into the pupil from the ophthalmoscopic mirror. If the pupillary space is evenly illuminated you may be sure there are no opacities in the media—certainly the anterior media—that are at all serious. By one of these three methods, therefore, simple inspection, oblique illumination, or the ophthalmoscopic mirror, any ordinary case of cataract can be diagnosticated readily and with ease.

But occasionally there arise cases where a differential diagnosis is a matter of no little difficulty. Quite a

number of the text-books written since the invention of the ophthalmoscope, will tell you that the existence of an opaque lens can be determined by means of this instrument, and the oblique illumination, with a certainty which admits of no exception. Happy would we be if that were so, and the purpose of this clinical lecture is to point out a class of cases in which this great instrument is not always sufficient in itself to establish a diagnosis.

For this purpose I will ask you to examine with me this woman, Mrs. X., who is thirty-eight years old. She came to the dispensary a week ago, being led by her daughter. In the right eye she had been blind for a number of years, but vision in the left had been sufficient to enable her to get about and perform her household duties until within the last three months. She is now blind in that. If you look at her pupils, you will see that they are black, with no appearance of gray, green, or white, whatever. You will observe this peculiarity about the eyes, however, that the iris in both oscillates or trembles when she moves the eyes. This is evidence of a lack of posterior support to the iris, and indicates a slight dislocation of the lens. Proceeding now to a further examination with the ophthalmoscope, we throw the light from the gas-flame, by means of the mirror, into the pupillary space. There is no reddish reflex—all is black. We are certain now that there is opacity somewhere in the refracting media, but its exact locality is not revealed to us by the mirror alone. It might be anywhere from the aqueous humor to the retina. We now concentrate the light on the anterior portion of the eye by means of a strong convex lens. The cornea is clear, and the aqueous humor unclouded, for the iris is seen clearly. The pupillary space is black, to the ordinary observer it would seem perfectly black, but an oculist of experience would find a very slight tinge of gray, such as is usually found in the pupils of persons advanced in life. The pupils have been dilated with atropine, and as far as can be seen toward the periphery there is no irregularity, no striation, but everywhere an even, smooth field of black. Such an appearance is so different from that of the ordinary cataract which you have seen here so often, that it would probably never have occurred to you to suspect that it was a cataract. But it is evident from the examination with the ophthalmoscopic mirror that there is an opacity somewhere posterior to the iris which obstructs the passage of light, and this obstruction must be either in the lens or vitreous humor.

How shall we determine in which of these two tissues the obstruction resides? The ophthalmoscope and oblique light, as we have seen, not giving us definite answers, we must resort to a test which was the first one used to determine, in a scientific manner, the presence of the lens in the eye as well as its transparency. It is called among the older writers—that is, those in the preophthalmoscopic era—the "Purkinje-Sanson," or simply the "Sanson" experiment (in honor of the man who first described it),[1] or the "catoptric test." The test is based upon the well-known laws of reflection from curved surfaces. The lens being a body with curved surfaces placed in a medium (the humors of the eye) of less density than itself, must furnish, in accordance with these laws, two images of an object held in front of it, just the same as an ordinary convex lens held in the air.

If we place a candle in front of a healthy eye, we see three images of the flame when it is held a little to one side of a line passing through the centre of the observed pupil and our own. The first of these, on the side next the candle, is a bright erect image of the candle-flame reflected from the convex surface of the cornea; the second is the blurred outline of the erect image reflected from the anterior convex surface of the lens; the other very small—so small indeed that it can be very readily overlooked and can be seen distinctly only by means of a magnifying glass,—and inverted, comes from the concavity in the vitreous in which the posterior wall of the lens rests. If the candle is moved up and down, the images also move; the two erect ones from cornea and anterior surface of the lens in the same direction as the candle, the small inverted one in the opposite direction, as do all images formed by concave surfaces.

It is perfectly evident that in order for the small inverted image to be formed, and consequently seen, light will have to pass through the lens. Its absence, therefore, is conclusive evidence of an obstruction to the passage of light—lenticular opacity, in other words.

We will now apply this test to the eyes of Mrs. X. Holding a candle about eighteen inches a little to the left of a line passing through the centre of a pupil, we see the bright erect image of the flame from the cornea, and the blurred quite indistinct image from the anterior surface of the lens, but nowhere the small bright inverted image from the anterior concave wall of the vitreous, such as we saw in the eyes of the gentleman with a transparent lens, on whom we just now applied the test. The diagnosis is, therefore, established beyond peradventure—the patient has cataract.

This, gentlemen, is not the first time that we have been compelled, in this clinic, to resort to this old method of diagnosticating cataract. A case of even greater difficulty than this one presented itself, in accordance with that law which seems to govern the occurrence of rare cases of disease, only two weeks ago. Some of you, who were present at the time, will doubtless remember her. It was in a colored woman of sixty-eight years, whose left eye was fairly good, but whose right had been blind for some time—but how long we could not find out since an intelligent account of it was not to be had. Both pupils were of the same degree of blackness, and were quite as black as those of her daughter of twenty-eight years, who accompanied her. The ophthalmoscope showed, not a perfectly black pupillary reflex, but a faint shimmer of red or brown, though perfectly uniform and even. The pupil was dilated with atropine, and a careful examination made by the oblique light; and though the whole of the pupillary space was carefully and repeatedly examined, even with a magnifier, not a trace of striation or irregularity of any kind whatever could be found, except at the lower inner corner, where there was a single white projection into the pupil of about one millimetre, evidently in the capsule, as it was immediately under the iris.

It curiously happened that the same day another patient presented herself with an eye having exactly

[1] Purkinje: Beobacht. u. Versuche z. Phys. d. Sinne. Berlin, 1825.
Sanson: Leçons sur les Mal. d. Yeux. Paris, 1837.

the same appearances under the ophthalmoscope and oblique light, barring the opacity in the capsule. The vision in the affected eyes of these two patients was about the same—that is, there was a good perception of light and normal projection, but no power to distinguish even large objects, though held close to the eye. I do not hesitate to say that without the aid of the "catoptric test" it would have been impossible for even an expert to have made a differential diagnosis in these two cases. We applied, in the presence of some of you, this test, and demonstrated to the satisfaction of all that the small inverted image was present in the one case and absent in the other, and so absolutely did we trust the finding of this examination that we at once sent the one case to the Garfield Hospital for operation, while the other was put under treatment for a choroiditis with serous effusion into the vitreous. The case of the colored woman sent to the hospital, confirmed, under the operation, our diagnosis in a most satisfactory manner. It was my desire to extract the cataract in the capsule if possible, for I wanted to subject the lens to some examinations for determining its exact character and constituents. In the accomplishment of this I was most fortunate. Latterly I have been making all extractions without an iridectomy whenever I deemed it safe, but to extract in the capsule is much easier and less dangerous with an iridectomy, and in the present instance, after making a large incision after the manner of de Wecker, I excised a rather large piece of the iris and succeeded, by manipulation, in delivering the lens in the capsule without the loss of a single drop of vitreous. The lens was at once measured and found to be 8.5 millimetres in its equatorial diameter and 2.7 millimetres in its antero-posterior diameter. Those measurements included the capsule, and fall only a little below the measurements of a normal adult lens. When held against a black background it appeared perfectly black, but when viewed by transmitted light it gave a rose-amber color at the periphery which gradually and evenly deepened into a dark reddish-brown at the centre. It was placed in a neutral fluid and taken at once to the Army Medical Museum, where Dr. Gray was kind enough to examine it under the microscope. He found some folding of the capsule, but the lens structure itself was perfectly uniform; neither by transmitted nor reflected light could any irregularity in density be made out under the highest powers that could be applied. There were no pigment granules anywhere. I then took it to the chemical laboratory at the National Museum and Prof. F. W. Clark was good enough to examine it spectroscopically. The examination was made with a Hoffmann's hand spectroscope, and Prof. Clark assured me that any hematine could be excluded, for there was an entire absence of the blood absorption bands. There was, however, a cutting off of the whole of the blue end of the spectrum.

This last is exceedingly interesting, taken in connection with a clinical phenomenon which is quite frequently observed in persons operated on for cataract. Only a few weeks ago I operated on a woman for cataract having a hard nucleus. As soon as the eye was opened, after I had cleared the pupil of some remaining corticalis, she exclaimed: "Oh! how blue every thing looks." Such an experience is very common with intelligent patients who are accustomed to observe their sensations closely. What is the cause of it? A spectroscopic examination of the nucleus removed from her eye, I think, readily explains it. It was exactly the same as in our specimen of "black cataract." All the blue rays of light are absorbed by the lens, and only the rays belonging to the red and yellow end of the spectrum struggle through and reach the retina. This has continued for years, and the parts of the retina or brain which take part in the perception of blue have remained dormant and resting, while the stimulation of the yellow and red rays has continued all the while. Now, when the lens is removed and a flood of white light containing all the colored rays in due proportion, is admitted into the eye, the blue rays are perceived so strongly as to overpower the others, and give a predominating color to all objects. It is analogous, or identical, with the phenomenon observed when you look fixedly at a cross or other object of a red color for a few seconds and then direct your gaze to a white wall, or sheet of paper. The cross is seen for a short time on the white surface as green or bluish-green, according as the original color was red or yellowish-red.

After the occurrence of the first of these cases, and being by it made aware of the great difficulty that would be experienced by a young practitioner in determining the seat of the opacity, I examined all the text-books to which he would be likely to look for information, to find how far they would give him assistance in his time of need.

There is almost a unanimity of silence as to the catoptric test, in all the text-books published since 1851, the date of the invention of the ophthalmoscope. Of our American text-books, Alt, Schell, and Noyes do not mention it at all in connection with cataract. Williams mentions it, but disparagingly—"It is not very easy or certain of application," he says; and Mittendorf mentions it only incidentally. Of the English works, no notice of it is found in Nettleship, Swanzy, Wolf, or Macnamara. Wells mentions it, but says it is not used now; and Haynes Walton, in the edition of his work published in 1861, dismisses the subject with the following sentence, "Purkinje's candle or the catoptric test, so much vaunted as a means of distinguishing incipient cataract, is really valueless, but as it enables us to pronounce with certainty whether the lens is absent or not I introduce it here."

Of the foreign text-books that I consulted, Schweigger, Massillon, and de Wecker pass it over in silence, while Meyer says that "the formerly much used catoptric test of Purkinje-Sanson is *ausser Gebrauch gekommen*." On the contrary, nearly all the works published prior to the invention of the ophthalmoscope give it great prominence as a method of diagnosis.

While thus valuing to the fullest extent the brilliant discoveries in diagnostic methods in more recent times, let us not undervalue or neglect those other means on which our fathers in ophthalmology wholly relied. We cannot have at our command too many methods of differentiating one form of disease from another.

Concerning the essential character of black cataract, its etiology and frequency, there seems to be much difference of opinion. Some modern writers do not mention it at all. You will not find it alluded to in the text-books of Alt, Nettleship, Williams, Noyes, Swanzy, or Wolf, and those that do so, for the most part, give it but

a passing notice. Mooren, in his tabulation of 108,000 eye cases,[1] gives 6536 different affections of the lens which had come under his observation, but among them not a single case of *cataracta nigra* is recorded. On the contrary, Dr. Knapp, of New York, writes me that he has seen "dozens of cases of *cataracta nigra*," one of which he had just extracted at the time he wrote. Dr. Chisolm, of Baltimore, whose experience in cataracts is probably as large as any one in this country, says that in 477 cases of cataract he saw in the last twelve months, there was one case of typical black cataract, but even in this there was some striation visible by means of the oblique illumination. Dr. Ayers, of Cincinnati,[2] in his paper on the subject, says that Dr. E. Williams in his vast experience has seen but two cases. Armaignac[3] is of the opinion that it occurs once in about 500 cases of lens trouble. Mackenzie[4] says, "I have seen a few cases of lenticular cataract in which the opacity was so very dark that without close examination the disease might have passed without detection; on concentrating the light on the pupil the lens appeared striated. Such cases have been called *black cataracts*." Desmarres[5] gives an account of a single case he saw in his practice. Dupuytren and Delpech never encountered a case in their immense practice, and others of equal prominence have denied its existence.

Even as late as 1853, the *Dublin Medical Press*, in commenting upon Alessi's case of black cataract, reported in the *Bulletino delle Science Medicale*, says: "The ghost of a black cataract has been haunting the study of the ophthalmologist time out of mind, never to be caught, and seldom to be perfectly seen. Here it is again, 'the field of the pupil quite dark,' 'the appearance was of a dull, dusky color,' 'a black tint,' 'a reddish-black,' 'a dark color,' 'which is lost by maceration in alcohol,' and as like a 'flattened bog-berry' as a sea-serpent is like a whale."

My own opinion, gathered from reading considerable literature on the subject, is that brown, partially black, cataracts are rather common, but that pure black cataracts, particularly those of the character of our first case, which show absolutely no striation by oblique light, are extremely rare.

There is as little uniformity in opinions regarding the cause of the blackness of these cataracts as in respect to their frequency.

Desmarres's case (l. c.) was examined by MM. Gros and Lebert. The former found pigmentary granules and grains of colored matter in the cortex; while the same lens examined by the latter was found to have no grains of pigment, but a homogeneous browning of the lens fibres.

It is not at all improbable that the pigment and brownish granules seen by Gros, and also by others who have reported similar conditions, are due to the presence of the pigment of the iris and blood-globules which have adhered to the lens in passing through the pupil or coloboma of the iris.

The case reported by von Gräfe,[6] however, seems to have been somewhat different. It was in a man twenty years of age, who had had a blow on the eye. The nucleus was dark, almost black, with a spot of blackness on the corticalis, the greater part of the corticalis, however, being white. The lens showed, on examination after extraction, a quantity of pigment diffused and in spots among the lens fibres, all of which gave the chemical reaction of blood. He considers this case, and one other case of a similar kind which he relates, to be due to the imbibition of blood by the lens, following hemorrhage in its vicinity.

He relates, however, a second case, which seems to be identical with our first. It was in the pre-ophthalmoscopic days, and the pupil appeared steel gray, and the small inverted image in the Purkinje-Sanson experiment was lacking. The lens, on extraction, was of a dark amber color.

Müller's case[1] was very much like ours, except that there was a posterior synechia. A microscopic examination did not show any granules or pigment.

In the *Index Catalogue of the Library of the Surgeon-General's Office* there are fifty-one titles under "black cataract," not including text-books, and from a consultation of a majority of these articles, and of the most prominent treatises on the eye, I am satisfied that two very distinct forms of lens affection have been described under the term *cataracta nigra*. In one there is undoubted infiltration of pigment into the lens-substance, probably originating from a hemorrhage in the vicinity of the lens, which should be called *cataracta pigmentosa*. In the other, the true *cataracta nigra*, there is no infiltration of pigment, but simply a sclerosing or hardening of the whole of the lens, of the same character as in the nucleus of the ordinary "hard cataract." In other words, the lens becomes all hardened nucleus. In proportion as this sclerosing process is even and smooth, leaving the lens fibres of the same density throughout, in that proportion will the lens reflect less and less light, and the pupil offer less and less the usual white appearance characteristic of the common form of the disease, and show fewer striæ and irregularities under oblique illumination. I think there can be no doubt that such black cataracts are longer in forming than the others, and consequently we should expect to find them more frequently in persons well advanced in life.

The prognosis for operation in such cases does not seem to be worse than in the other forms. In our own case the patient made a faultless recovery, and has excellent vision. In operating, however, the fact must be borne in mind that the lens is large, and the corneal incision should be correspondingly ample.

[1] Fünf Lustren ophthalmologischer Wirksamkeit. Wiesbaden, 1882.
[2] Black Cataract, Cin. Lancet and Observer, 1872.
[3] Journ. d. Méd. d. Bordeaux, t. ix. p. 357.
[4] Diseases of the Eye, 4th ed., 1854.
[5] Traité d. Mal. des Yeux, 1885.
[6] Archiv f. Oph., i. p. 353.

ORIGINAL ARTICLES.

NEPHRORRHAPHY AND NEPHRECTOMY.

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CASE I. *Nephrorrhaphy.*—I. B., aged thirty-two years, married, a native of Pennsylvania, was admitted to the medical ward of the University Hospital, October 13, 1883, with the following history:

[1] Archiv f. Oph., ii. 2, p. 164.

His occupation was that of a salesman. For some time he had been employed in a furniture store and enjoying perfect health. In the fall of 1878, while lifting a heavy piece of furniture, he felt something give way in his back, followed by a sharp sickening pain in the same region. His suffering was so great that he was unable to continue his work.

When admitted to the hospital he complained of a severe dragging pain in the lumbar region which extended downward to the caput coli, was paroxysmal, and always aggravated by any unusual effort. Dimness of vision was also present, though a careful examination of the eyes failed to disclose any abnormality whatever. In the left lumbar region and extending forward to the umbilical there was a tumor having the general conformation of the kidney. This could be readily felt through the abdominal parietes, though occasionally it would disappear beneath the ribs, and could only be made tangible by the manipulations of the patient.

At the time of his admission albumen in small quantities was detected in the urine, but no casts. The former disappeared very soon or after a few days of quiet in the hospital ward. The diagnosis made by Prof. Pepper, under whose care the patient was placed, was floating kidney. Various measures were adopted to fix the organ but without avail, and at the end of some months he left the institution without realizing any material benefit. The following October, finding himself growing worse, he returned to the hospital and came under my care. Several examinations of the urine were made, none of which gave any evidence of structural change in the kidney. Nephrorrhaphy was proposed as the only procedure promising relief. The proposition was accepted, and on the 10th of October the patient was placed on the table; the kidney exposed through the loin and the organ stitched in the wound by means of animal threads passed through its capsule. A drainage tube was introduced and the incision closed by sutures. The operation was made under strict antiseptic precautions and resulted in prompt union. After the first twenty-four hours the temperature remained normal, and on November 5, 1884, the patient was discharged.

CASE II. *Nephrectomy.*—On April 21, 1885, he again returned to the hospital with a renewal of all his old symptoms in so aggravated a degree as not only to incapacitate him for his occupation, but requiring the use of morphia to obtain a reasonable amount of comfort. He stated that while engaged at some work he was seized with lumbar pain and felt that the kidney had left its moorings. An examination verified his fears, as the organ could be distinctly recognized in front, through the abdominal parietes.

Nephrectomy was now proposed, and to this the man readily acceded, and on the 23d of April the operation was done by the lumbar incision, the wound closed by sutures, and a drainage tube brought out at the lower angle, the whole procedure being executed under strict antisepsis. The temperature at no time rose above 100°, and the urine varied in quantity from twenty-five to forty-five ounces daily. At the end of fourteen days the drainage tube was removed, and on May 21, two days less than four weeks, the patient returned to his home. For some time a small sinus remained, which ultimately closed after the discharge of a loop of thread which, I believe, was the ligature that had been used to secure the renal vessels. The patient continues well up to the present time.

The operation of nephrorrhaphy has not been attended with the success which at one time was anticipated, the organ in most cases breaking away and wandering into its former abnormal position. Still I do not think this mode of treatment should be too hastily abandoned. I believe that with some modification of procedure better results will be obtained. That which I would suggest would be, instead of tearing away too freely the fat which surrounds the organ, simply to open a crevasse sufficiently large to admit of the kidney being slipped through, and then with the mass of adipose tissue in front, let the latter, instead of the kidney, be stitched to the edges of the wound.

CASE III. *Nephrectomy.*—Mrs. H., aged sixty years, white, married, was admitted to the private department of the University Hospital, Nov. 19, 1886. Nine months previous to admission she had experienced pain in the left iliac region accompanied by dragging sensations in the corresponding loin. These symptoms increased in severity; she began to lose flesh and strength and had become exceedingly nervous. On examination an irregular swelling was readily discovered in the left lumboiliac region, movable, sensitive to handling, and apparently about twice the size of a healthy kidney. The urine contained neither renal elements nor albumen. The absence of renal epithelium and of blood in the urine, the progressive loss of flesh, and a suspicious color, left me somewhat undecided both as to the organ involved (kidney or ovary) and the benignity of the tumor. Still I inclined to the opinion that the growth was an enlarged kidney. As the woman's health was failing rapidly, laparotomy was proposed and accepted. Assuming that possibly the disease might prove to be ovarian, this operation was, under the circumstances, deemed best. On November 20 the patient was placed on the operating table, and the abdomen opened by a median incision three inches in length, bringing at once into view a large irregular-shaped mass which, on a closer examination, proved to be the kidney. Its peritoneal investment was carefully stripped off, the ureter and vessels after being securely ligated were divided and the organ removed. After applying the animal thread to two or three small bleeding vessels, the cavity of the belly was washed out by warm water, previously well boiled, the wound closed by interrupted sutures, covered with a compress of carbolated gauze and a pad of salicylized cotton, and the whole secured in place by a broad flannel binder. During the operation the spray was allowed to play over the abdomen and a solution of the bichloride (one to five thousand) was used for the sponges. The amount of daily urine could not be accurately ascertained as a certain quantity escaped in the bed before the urinal could be adjusted, but that which was passed voluntarily and collected varied

from ʒix to ʒxxij and on one occasion rose to ʒxxx. The temperature oscillated between 98° and 99⅕°, and on only two occasions did it rise to 100⅘°, subsiding at once to 99⅘° after the bowels had been relieved by an enema. On the 28th the stitches were removed, the wound having healed in its entire length. After the 30th the patient sat up daily; indeed, from the time of the operation there were present no unfavorable symptoms whatever. On the 7th of December while sitting up she was suddenly seized with severe abdominal pain, which was attributed to a cold taken in changing her room. This increased in severity, though unattended by any abdominal distention. The urine had rapidly fallen off in quantity, soon followed by suppression. A hypodermatic of morphia one-quarter grain, atropia one-hundredth grain relieved her suffering, but she soon sunk into a profound stupor and died.

As an autopsy was not allowed, the cause of death in this case remains somewhat obscure. It is difficult to conceive of peritonitis setting in at so late a date from ordinary causes, as the patient was then in her third week, and there had been no error of diet or other indication to account for such an attack, unless the cold, which necessitated a change of rooms, may have done so. The more reasonable explanation for the unexpected termination of the case, I think, may be referred to the remaining kidney. The organ removed contained a number of cysts, some of them very beautiful illustrations of pearl cysts. These cysts did not appear to communicate with the pelvis, and hence the absence of renal elements in the urine. It is, therefore, more than probable that the other kidney was undergoing a similar degeneration—as bilateral cystic disease of these organs is quite common—and that it was unequal to the work of supplementing the functions of its fellow, in consequence of which uræmic poisoning followed, and this may have developed the peritonitis if such a condition was present.

SOME FACTS RELATING TO THE EFFECTS ON MAN OF FUEL- OR WATER-GAS, AS OBSERVED IN THE RECENT CASES OF POISONING AT TROY, N. Y.

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THE introduction into cities of fuel- or water-gas for domestic and manufacturing purposes is becoming a subject of interest, not only on account of its cheapness and cleanliness, but more especially on account of its poisonous nature, and from the fact that it is quite odorless, and produces its deleterious effects before there is any suspicion of its presence.

A number of accidents have occurred since its introduction here, and very recently three fatal cases in one house. No serious cases of poisoning have, to my knowledge, occurred to those who used the gas for domestic or manufacturing purposes, but all the cases of sickness and death attributed to it here have occurred in houses on the street on which the mains are laid, and where, from presumed leakage, the gas has permeated the soil beneath the frozen earth into the cellars, and thence up into the buildings. In five stores located near one of the mains, the clerks and porters, about fifteen persons in all, were so seriously affected on one day as to be obliged to have medical aid, two or three losing consciousness for a short time.

On the evening of January 16th the inhabitants of a row of three-story brick buildings were almost all seriously overcome by the gas. When the cause was discovered the people of the vicinity were aroused by the police, who found many sick, and on one flat all the occupants dead. The opening of windows and doors for the remainder of the night saved many lives. The persons who were found dead had probably been so for some hours, as "rigor mortis" was present in all. Their fires were burning in the stoves and their lamps still lighted on the tables. One of these cases was an old woman, who was found sitting in a chair by the stove, with her head thrown back and in her hand her artificial teeth, as if she had been vomiting. Her daughter, a person about forty-five years old, lay dead on the floor near by, with a slop bucket at her side, as if she had also been vomiting. The third, a man about forty years old, sat upright on a lounge with his head reclining on his shoulder as if death had been sudden and painless. The expressions of the deceased were placid.

I was present and assisted at the autopsies of these people made by Dr. John W. Morris, about eighteen hours after death. Their bodies appeared to have been in good health and well nourished, and there were no external marks of violence nor any evidence of commencing decomposition. The faces of the two found sitting were pale and exhibited a placid expression, eyes closed, pupils natural, neither contracted nor dilated, conjunctivæ clear.

The woman found on the floor in dorsal recumbency also had a peaceful expression of the face; her tongue was slightly protruded between her teeth, and the neck and one side of the face were discolored by florid hypostatic congestion. Her pupils were natural and conjunctivæ clear. On section the muscles were noticed to be unusually red—a bright cherry-red. The lungs were free from adhesions, and filled their cavities completely, were crepitant throughout, and of a cherry-red color. On section serum flowed freely, but there was no œdema. There was no unnatural amount of fluid in the pleuræ or in the pericardium. The heart was empty and on section fluid blood escaped from the vessels. The left ventricle was contracted and firm. The right not contracted and, together with the auricles, rather flabby. Valves were all normal.

The abdominal viscera were all in a normal condition. The stomach contained a moderate amount of well-masticated food without any unnatural odor, and there was no odor of alcohol or beer. The intestines were natural as to distention and contents, but were of an unnaturally pink color throughout. The kidneys, spleen, and liver were all normal. The gall-bladder contained five calculi. The blood everywhere was fluid and no coagulum was seen.

The body of the old woman presented the same unnatural vivid redness of all the solid portions except the adipose tissue. The lungs filled their cavities completely, and were crepitant throughout. Heart

was empty, valves normal, and blood everywhere fluid. Abdominal viscera were all normal; stomach contained a small amount of liquid food, and no odor of liquor, or of anything unusual. Intestines were of a decided pink color. Kidneys, spleen, and liver normal, except that they were too vividly red in color.

Autopsy on the man presented the same unnatural vivid redness of the textures, except the adipose. His lungs filled their cavities, and crepitated throughout. Heart empty, valves normal, blood everywhere fluid, and no coagulum. Stomach contained a small amount of well-masticated food, without odor of liquor; intestines of a pink color. Kidneys, spleen, and liver normal. Brain membranes were vividly red all over, and an unusual amount of serum escaped when they were opened; the white portion of the brain was studded with an unusual number of red points on section; there was no coagulum in any part of the brain, and both in the sinuses and elsewhere the blood was fluid.

On opening the cavities of the first woman I put my face close to the parts, to obtain a peculiar faintly alliaceous odor which I had perceived and which I had never before recognized. This presently gave rise to a sense of faintness and severe epigastric pain, so much so that I was for half an hour obliged to stop work, and the resulting headache and feeling of indisposition lasted all day and evening. I have made and been present at several thousand autopsies, and was never before affected unpleasantly, and, as I was in good health at the time, ascribe it to inhaling the poisonous gas respired by the woman and exhaled at the autopsy from her tissues.

I have made inquiries of several of the persons who resided in the buildings and who were affected by the gas, as to their symptoms, and all stated that they felt either pain in the head, or a sense of tightness like a band around it, and also faintness and giddiness until they became unconscious. A few had epigastric pains and vomiting, and quite a number whom I did not personally see are reported to have suffered from the same symptoms.

Fuel-gas is not used for illuminating purposes; it burns with a pale bluish flame of great heating power, and it is produced by decomposing the vapor of water in the presence of burning coke or coal. Its constituents are reported to be hydrogen 56, carbonic oxide 44 parts, in 100.

P. S.—Since writing the above I learn that a gentleman who was exposed to the gas, in his store, about January 7th, was confined to his house in consequence for a week.

On the occasion of the fatal accident, a gentleman living in the third story of a house in the same block was awakened, about eleven o'clock, by the strange conduct of his dog. The animal made unusual noises like the act of vomiting, and whined and barked in a peculiar way, which awakened the man and his wife, who then discovered that they were sick, and that other occupants of the building, also, were sick. Probably if the dog had not aroused them, the inhabitants of this whole block of buildings would have perished.

A YEAR'S WORK IN OVARIOTOMY.[1]

BY WILLIAM GOODELL, M.D.,
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IT was my intention at first to embody in one article all my year's work in laparotomy. But, since the number of cases amounts to fifty-nine, the consideration of which would make too bulky a paper, I have decided to limit myself to my cases of ovariotomy, which numbered twenty-nine, with three deaths. These cases I now present in a tabulated form, and let me here premise that they were not selected, but were taken just as they came to me. The only case on which I refused to operate, was one which had, besides an ovarian cyst, a cancer of the cervix uteri. Let me also add, that in every case save one—No. 189—the operation was completed, no matter what difficulties were encountered, so that I have no exploratory incisions to report on the score of ovarian cysts.

Of these twenty-nine cases, twenty-three were operated on at my private hospital, four at the homes of the patients, and two at the Hospital of the University of Pennsylvania. Not one of these three deaths was due to septicæmia, but to the grave complications in each one, and a few words of explanation are needed. Before the death of Case No. 178 I had had in succession twenty-two successful cases, and afterward a series of eight cases before the next death took place.

No. 178 was a dreadful case of intra-ligamentous cyst. The lady, aged forty-three, first discovered the tumor in October, 1885, and since then it had grown rapidly. She suffered much pain from it, had greatly emaciated, and had finally become bedridden. She had consulted a number of experts, who had all pronounced the growth to be a fibro-cyst of the womb. I found a very large and immovable tumor, completely filling up the abdominal cavity, and bulging so low down in Douglas's pouch as to present at the vulva. Fluctuation was obscure, and adhesions were apparently universal. A prominence on the left side of the abdomen, and nearly on a level with the umbilicus, proved to be the fundus of the womb. The os uteri was drawn high up behind the symphysis pubis, as is often the case in uterine growths, and very rarely indeed in ovarian tumors. The sound went in five inches, and its tip in the prominence could readily be felt through the abdominal wall. The womb was immovable, and the tumor seemed to spring directly from it. My diagnosis was either a fibro-cyst of the womb, or a colloid ovarian cyst with close uterine connections, and with pelvic and general adhesions. In view of the very weak condition of my patient, the obscurity in the diagnosis, and the presence of formidable adhesions, I looked upon the case as a forlorn one, and I must confess to having felt a great reluctance to undertake the operation. She noticed this, and taxed me with it, saying, "You are afraid of your statistics." I replied that I had never refused to operate, no matter how ill the patient was, but that

[1] Read before the Obstetrical Society of Philadelphia, January 4, 1887.

I was afraid that she would die on the table. This, however, did not deter her, for she was a brave woman, and knowing that an operation was her only chance, she was determined to risk it.

On June 22d I operated on her, being aided by Drs. Jacob Roberts and W. Constantine Goodell. There were present also Drs. A. E. Malloch and John A. Mullin, of Hamilton, Ontario, and Dr. John W. Pickup, of Brockville, Ontario. The tumor turned out to be an intra-ligamentous and colloid ovarian cyst. It was attached to the whole of the ascending, transverse, and descending colon, to the small intestine, to the pelvis, to the bladder, and to the whole surface of the womb, measuring five inches. Over twelve inches of the right ureter had to be carefully dissected off from it. The lower portion of the cyst was included between the folds of the broad ligament, and it had to be carefully enucleated from it. When all the adhesions were severed the tumor came away without a pedicle. As the other ovary was merged in the large one, I could not tell which ovary was the diseased one; but, I think, from the implication of the right ureter, that it was the ovary of the right side. Very little blood was lost, for many pressure forceps and ligatures had been applied, and the peritoneal cavity was easily cleaned out. I put in a drainage tube, and was tying the last few stitches, when my patient's pulse suddenly flagged and she died in less than a minute. The operation had lasted two hours, and my great regret is that I did not let her partially come out of the ether several times during the operation; but her pulse and respiration had kept good.

Intra-ligamentous cysts, or those which grow between two layers of the broad ligament and carry them up as the cysts grow, present grievous complications, which tax the pluck and skill of the operator to the utmost. I had three of them during the past year, two besides the foregoing one. They were Cases 179 and 182. Each case required careful and patient enucleation, and the application of many ligatures. In the latter one, the cyst was also shelled out without a pedicle. They both got well without any drawbacks. It is in this kind of cyst that the operator is liable to tear the bladder, to wound the womb, or to rupture the ureter. In such cases one has to have all one's wits on the alert.

Case 187 was one of a uterine fibroid as large as the adult head, and a cyst of the left ovary weighing sixteen pounds. The right ovary, although sound, was removed on account of the presence of the fibroid. She did well for two days; then symptoms of obstruction set in, which could not be overcome, and she died on the sixth day, without any rise in the temperature. I cannot but think that pressure from the fibroid tumor was the main cause of the difficulty. Obstruction of the bowels after ovariotomy is the dread of all operators. It is due sometimes to the adhesion of a knuckle of intestine to the stump of the pedicle, to the abdominal incision, or to large denuded surfaces, and sometimes to an adventitious band from inflammatory exudation. Paralysis of the intestines from peritonitis will also cause it. I have had my share of such cases, of desperate ones too, and my rule is to get the bowels open as soon as symptoms of obstruction set in. Calomel and belladonna by the mouth, and turpentine by the bowels, are the remedies on which I rely, and they have never failed me, if my memory serves me no trick.

My last fatal case, No. 189, was an incomplete operation, and by many ovariotomists would not, on that account, have been included in the number of ovariotomies; but I think it fairer to do so. The lady was thirty-six years of age, married for nine years and sterile. The tumor was first noticed in June and had quickly developed. She had emaciated rapidly and suffered more or less abdominal pain. On November 19th, Dr. R. N. Downs, of Germantown, whom she had then consulted for the first time, called me in to see her. The womb measured four and a half inches, and was immovably fixed by a bilobed and dense tumor which seemed to spring from it. This tumor bulged low down into Douglas's pouch, and was knobby to the touch. There was evidently ascitic fluid present, but fluctuation could not be elicited from any portion of the tumor. The diagnosis was obscure, it lay between a soft myo fibroma or a sarcoma of the womb. From my standpoint, I was averse to an operation and advised delay. But two weeks later she suffered such agonizing pains, and such oppression from pressure, that I was forced to interfere, much against my will, especially so because a second examination had strengthened me in the idea that the growth was malignant. This pain was so great that the largest doses of morphia combined with chloral did not even allay it, and for the week preceding the operation she did not get any sleep.

On December 18th I operated, being aided by Dr. Jacob Roberts and by my son. There were also present Dr. R. N. Downs, Dr. W. Ulrich, of Chester, Dr. W. L. Taylor, of Philadelphia, and C. Laughlin, of Paris, Ill. A large amount of ascitic fluid escaped, and to my surprise an ovarian cyst, weighing about fifteen pounds, came into view. It was thick-walled, and did not collapse when its compartments were, one after the other, emptied, and I had to prolong the incision through and above the umbilicus. The omentum was adherent; it was of a purple color and its enlarged vessels looked like a bunch of earthworms. I now discovered that the cyst had not a pedicle, but that it ended in a short, hard, and brittle cancerous mass about the size of my fist. I should like then and there to have abandoned the operation, left the cyst *in situ*, and closed up the wound. But I had gone too far to recede. The cyst had been badly torn, for my hand had been inside of it to break up its septa, and it was bleeding profusely. To reach the cancerous mass forming the pedicle, I had to cut away the uncollapsed cyst, and, as I dared not use pressure-forceps for fear of crushing it up, I grasped it with my hand as best I could. But a good deal of blood spurted out, and the outlook was so ghastly that two of the gentlemen present became faint, and one had to leave the room. At last the bleeding mass was transfixed, and I tied it as well as I could, not daring to draw on the ligature too tightly, for fear of cutting through the friable nodules. Some bleeding vessels were also tied separately. A cyst of the left ovary, weighing about

TABLE OF TWENTY-EIGHT CASES OF OVARIOTOMY.

Total number.	Name and Residence of Previous Medical Attendant.	Age.	Condition.	No. of children.	Previous Tappings.	Place of Operation.	Date of Operation.	Adhesions.	Ovary Removed.	Weight of Tumor.	Length of Incision.	Drainage.	Result.	REMARKS.
161	Dr. F. W. Coover, Harrisburg, Pa.	20	S.	...	1	Private Hosp.	Jan. 10	Pelvic.	R.	15 lbs.	Long.	None	Recovery.	Colloid cyst.
162	Dr. Wood, Coal Port, Pa.	36	M.	5	...	"	Jan. 24	Universal.	R. L.	58 "	"	"	"	Long and tedious operation; many ligatures.
163	Dr. W. M. L. Ziegler, Philadelphia.	21	S.	...	...	"	Jan. 25	None.	L.	2 "	Short.	"	"	Parovarian cyst.
164	Dr. J. B. McCloskey, Morris, Pa.	23	S.	...	...	"	Jan. 31	None.	R.	10 "	"	"	"	
165	Dr. E. T. Johnson, Dublin, Pa.	54	M.	...	...	Univers. Hosp.	Feb. 7	Omental.	R.	20 "	"	"	"	Malignant colloid; had burst, infecting all abdominal organs.
166	Dr. S. Marks, Milwaukee, Wis.	48	M.	2	...	Private Hosp.	Feb. 14	None.	R. L.	5 "	"	"	"	
167	Dr. W. Richardson, Montrose, Pa.	57	M.	5	...	"	Mar. 7	None.	R. L.	10 "	"	"	"	Parovarian cyst.
168	Dr. R. P. Heilman, Emporium, Pa.	36	M.	3	...	Univers. Hosp.	Mar. 9	None.	R. L	2 "	"	"	"	
169	Dr. T. Woolverton, Trenton, N. J.	49	W.	1	6	Private Hosp.	Mar. 21	None.	L. R.	49 " 1 "	"	"	"	Left ovary cystic; right a dermoid cyst. Bedridden for nine months.
170	Dr. T. R. Bixler, Carlisle, Pa.	45	M.	2	1	"	Apr. 25	Omental, parietal, intestinal.	R.	20 "	Long.	"	"	
171	Dr. F. Herff, San Antonio, Texas.	42	W	...	...	"	May 9	Pelvic.	L. R.	2 "	"	"	"	Multiple fibroids of womb.
172	Dr. J. Marshall, Tuckahoe, N. J.	60	W.	8	...	"	May 16	Parietal, omental, intestinal.	L.	20 "	"	"	"	Appendix vermiformis dissected off cyst.
173	Dr. E. Kitchen, Brumfieldsville, Pa.	39	S.	...	...	"	May 16	Pelvic, parietal.	L. R.	15 " 1 "	Short.	"	"	
174	Dr. G. A. Parker, Southampton, Pa.	38	S.	...	3	Home.	May 25	Parietal, omental.	R. L.	30 "	Long.	"	"	Left ovary removed on account of multiple fibroids of womb.
175	Dr. G. Hemminger, Carlisle, Pa.	31	S.	...	...	Private Hosp.	June 13	Pelvic.	L R.	1 "	Short.	"	"	
176	Dr. S. M. McCollin, Philadelphia.	23	M.	...	...	"	June 17	Pelvic, omental, intestinal.	R. L.	10 " 1 "	"	"	"	
177	Dr. O. R. Quaintance, Slate Mills, Va.	35	S.	...	...	"	June 17	Pelvic, omental, intestinal.	R. L.	5 " ½ "	Long.	"	"	Right ovary dermoid, and full of hair.
178	Dr. Baily, Sioux City, Iowa.	43	M.	...	...	"	June 22	Universal.	?	54 "	"	Tube.	Death.	Died on table; intra-ligamentous cyst.
179	Dr. W. W. Moody, Sunbury, Pa.	39	M.	4	...	"	July 6	Pelvic.	L.	15 "	Short.	None.	Recovery.	Intra-ligamentous cyst.
180	Dr. E. W. Ekwurzel, Philadelphia.	45	M.	...	1	Home.	July 31	None.	L. R.	50 "	Long	"	"	Malignant colloid; had burst, infecting every abdominal organ.
181	Dr. Darrach, Philadelphia.	74	S.	...	1	"	Sept. 14	None.	L. R.	20 "	Short.	"	"	
182	Dr. G. H. Woods, Pine Grove Mills, Pa.	18	S.	...	...	Private Hosp.	Sept. 24	Universal.	R. L	25 " 1 "	"	"	"	Colloid intra-ligamentous cysts; large one enucleated without a pedicle.
183	Dr. W Goodell, Philadelphia.	36	S.	...	...	"	Sept. 24	Pelvic.	L. R.	1 "	"	"	"	
184	Dr. R. B. Watson, Lock Haven, Pa.	32	M.	2	...	"	Sept. 26	Parietal.	R. L.	48 "	"	"	"	
185	Dr. G. R. Welchens, Lancaster, Pa.	28	M.	...	...	"	Oct. 10	Intestinal, uterine, and br'd ligam't	R. L.	2 "	"	"	"	
186	Dr. O. P. Rex, Philadelphia.	44	M.	2	...	Home.	Nov. 6	Omental.	R. L.	20 " 2 "	Long.	"	"	Malignant cysts.
187	Dr. H. H. Roedel, Lebanon, Pa.	37	S.	...	...	Private Hosp.	Nov. 21	Omental.	L. R.	16 "	Short.	"	Death.	Also large fibroid of womb; died on sixth day from obstruction of bowels.
188	Dr. Isaac Barber, Phillipsburg, N. J.	54	M.	9	3	"	Dec. 16	Parietal, omental.	R.	29 "	"	"	Recovery.	
189	Dr. R. N. Downs, Philadelphia.	36	M.	...	...	"	Dec. 18	Omental, pelvic.	R. L.	15 " 10 "	Long.	Tube.	Death.	Death in twenty-six hours from shock; incomplete operation.

ten pounds, now appeared. It collapsed upon the withdrawal of its contents, but it was so fastened to the womb, broad ligament, and Douglas's pouch by a mass of cancerous excrescences that I did not dare to disturb them. So I tied it as low down as possible, and cut off the free portion. If I am not in error, this is the first time that I have ever left behind a portion of the cyst. A drainage tube was put in, and the patient removed in a collapsed condition to her bed. She rallied sufficiently on the next day to converse with her family, but much bloody fluid escaped from the drainage tube, and she died in twenty-six hours after the operation.

In the foregoing case, had I known the complications, I would not have operated. But I unhesitatingly assert that, when possible, malignant tumors of the ovaries should be removed. For the improvement which follows is usually something remarkable, and years may elapse before the disease returns. In one of my cases four years of excellent health elapsed before the cancer came back. In such cases both ovaries should always be removed. Two cases in point are Nos. 165 and 180. In each a malignant colloid cyst had burst and had infected every abdominal viscus. In the latter case, indeed, the colloid poison had penetrated even into the abdominal wall through the opening made fruitlessly with a large trocar by her physician. Both patients were in a deplorable condition, with swollen feet, great emaciation, and general cachexia, yet the operation was followed by a marked amelioration of symptoms, and the women are still living and doing well, wonderfully well when one considers the amount of abdominal disease. A. Martin, of Berlin, mentions a case in which there was no return of the disease for seven years after the operation. Ten years after her first operation Schröder removed the second ovary. She lived one year and a half after this.[1]

But there is another class of cases in which malignancy lurks unsuspected in the most benign-looking cyst. Every year I meet with such cases. For instance, Case 149 was operated on, both ovaries being removed on June 13, 1885. She was greatly improved for two months, when cancer attacked the pelvic organs, aud she died November 5th of the same year. Case 158 was operated on November 22, 1885, and she died from malignant disease of the pelvis in August, 1886. Case 150 promptly recovered from a double ovariotomy, to die a year later from metastatic cancer of the liver.

Out of my twenty-nine cases of ovariotomy, twenty-one had adhesions, three had universal adhesions, and eleven very formidable adhesions. This is an unusually large proportion, and I attribute it to the fact that women in this country put off the operation as long as possible. For instance, Case 162 had the tumor for seven years, and at the time of the operation the cyst weighed fifty-eight pounds and was universally attached. Most of my patients come to me only when they are forced to do so by their sufferings or by their discomfort.

Out of my twenty-nine cases there were twenty of double ovariotomy. This is a large number, but I make it a rule to remove the second ovary in all malignant or suspicious cases, in all cases in which, from age, it can be of no use, in all cases in which incipient disease is manifest, and always when I am asked to do so by my patient. I willingly yield to their request, because I have seen several cases of heartrending disappointment, and even death from cystic degeneration of the remaining ovary.

The drainage tube is not a favorite of mine, and I try to dispense with it whenever I can. It is only in cases in which oozing goes on and the peritoneal cavity cannot be kept clean that I resort to drainage. The two cases in which it was used were of that character, and both ended fatally from the severity of the operation. I still adhere to strict Listerism, but while I use the spray, I now turn it away from the wound, and aim more to disinfect the room by it. It is an intolerable nuisance, and I intend soon to give it up in my private infirmary, reserving it for the impure air of a general hospital. The dressing for the wound, which I use, is gauze dipped in Keith's glycerole of carbolic acid, 1 : 8 parts. I have tried powdered iodoform, but it so adheres to the stitches as to make their removal difficult. I have, however, very recently obtained a 50 per cent. iodoform gauze which I shall soon use.

With regard to the question of performing ovariotomy during the catamenial flow, I have on several occasions been compelled to operate at that time, and have had no reason to regret such a course. Cases 176 and 182 were operated on during the monthly flow, and I have successfully performed oöphorectomy under analogous circumstances. Thomas Savage, a very successful ovariotomist, operates in any case whether the woman is menstruating or not, and finds no difference in the result.[1] The fact that a metrostaxis invariably takes place after a double ovariotomy would go to sustain the position which Mr. Savage takes.

Of the twenty-nine cases seven had been previously tapped, and all of them recovered. Yet I cannot too strongly condemn the too prevalent habit of indiscriminate tapping. Apart from the danger of exciting inflammation and septicæmia, and of producing adhesions, tapping may cause the whole abdominal cavity to become infected by the fluid of a papillary or of a colloid cyst. This I have seen several times, and Case 180 is one in point. The consultant in this case tried to evacuate the contents of a colloid cyst. Only a few ounces came away, the rest was too thick. But through the hole made by the trocar a large amount of the contained jelly oozed out into the abdominal cavity, hopelessly poisoning it. Even the abdominal wall immediately around the puncture was infiltrated with it.

[1] Annales de Gynecologie, Mars, 1886, page 221.

SEA-BATHING A CAUSE OF EAR DISEASE.

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IT is a well-known fact that during the summer months, sea-bathing is a frequent cause of ear disease. Cold-water bathing, although of great benefit to many persons, frequently leads to chronic catar-

[1] British Medical Journal, April 14, 1883, p. 712.

rhal deafness, especially to those who have a predisposition to that disease.

The membrana tympani may be ruptured in diving or from the force of a wave striking against the side of the head and face; or, the cold water entering the auditory meatus, may not only set up an inflammation of the canal and drum-head, but may induce a tendency to chronic dermatitis and periostitis of the parts; the middle ear may also become secondarily involved, and occasionally the mastoid is affected from an extension of the inflammation. Still further, an inflammation of the tympanum may occur from water entering the middle ear through the Eustachian tube. I believe this latter frequently to be the explanation of an earache from sea bathing, as surf bathers are especially liable to have water enter the mouth and nasal passages. An acute catarrh of the middle ear is undoubtedly caused also in cold-water bathing from sudden chilling of the surface of the body when overheated, or from remaining in the water for a protracted period.

Children should be especially forbidden to "duck the head," as this frequently is the cause of catarrhal otitis media, and to prevent as much as possible a liability to ear disease while sea-bathing, the person should be careful to keep the head above water, and the auditory canals should be closed with non-absorbent cotton or wool.

Burnett, in his work on the ear, says: "It is noteworthy that no mammal but man goes voluntarily under water without being provided with a means of preventing the water from running into the ears. It is a fact well known to many, that hunting dogs taught to dive become deaf."

CASE I.—R., aged twenty-five, July 18th consulted me, and said that a week ago Sunday he went in bathing, and the following day the left ear began to pain him. Tuesday there was a slight discharge with some blood; he dropped some laudanum and sweet oil into the ear. The pain lasted till Wednesday morning; since then he has been annoyed by tinnitus, and the ear feels stuffed up. There is some autophony. He hears ordinary voice with the left ear.

Examination.—Left membrana tympani congested at the upper portion and slightly below; a small clot of blood on the drum-head, situated just below the umbo.

CASE II.—T. D., aged sixteen, June 26th. The patient said that three days ago he went in bathing, and directly afterward experienced pain in both ears, and since then the pain has been especially bad at night; he has also been suffering from headache.

Examination.—On removing some epithelium and cerumen from the right auditory canal, the membrana tympani is red and lustreless. Left membrana tympani also dull and congested.

CASE III.—Charles L., aged thirteen, July 3d. On Sunday, July 1st, he went in bathing; one hour afterward he had pain of a throbbing character in the left ear, which has continued ever since, with a sense as if something were stopping up the ear. There is no tinnitus or discharge.

Examination showed the left canal congested and tender; the upper portion of the membrana tympani (Shrapnell's membrane) red and swollen; no discharge or perforation.

CASE IV.—Joseph M., aged twenty-two, July 17th, bartender by occupation; he went in bathing July 13th, and the next day found that he had taken cold; he had pain of a pulsating character in the right ear, the pain being worse at night.

Examination.—The right canal contains some cerumen and epithelium; right membrana tympani red and denuded of epithelium.

CASE V.—Edward McC., aged ten, August 18th, says that six days ago he went in bathing, and on the following day began to complain of pain in the left ear, which has lately become very severe; two days ago he felt chilly sensations, and has been sick and feverish; there is no discharge.

Examination.—No pus in the left auditory canal; left membrana tympani red, lustreless, and tumid, especially around Shrapnell's membrane.

Aug. 21. The patient much worse; the pain very severe, especially at night, has not been relieved by the appearance of a purulent discharge, which commenced two days ago. There is marked mastoid pain, especially at night, the mastoid at apex being markedly tender to pressure. The patient looks very anæmic and weak, and before each onset of pain has chilly sensations, followed by fever; does not suffer, however, from headache or nausea. Temperature 101° F. at 5 P. M. Iodoform insufflated.

22d. The pain very much better, and apparently markedly relieved by leeching. He was also given tr. aconit. ♏j, and tr. ipecac. co. ♏ij, every two hours; also bowels were opened by a saline cathartic, The discharge is slight and the mastoid pain very much better. Very little discharge seen at bottom of the canal; membrana tympani is less congested; Politzer inflation gently applied, and iodoform insufflated.

25th. Very much better; no more mastoid pain; discharge very slight. He is quite deaf, and complains of a "stuffed up" feeling in the ear; his general appearance is much improved, and he is no longer pale. The discharge in the canal is very slight; congestion of the membrana tympani less marked; Eustachian tube pervious to Politzerization; inflation of the ear repeated and iodoform insufflated.

29th. No pain; he complains, however, of a slight buzzing tinnitus; discharge slight. Hearing distance, Watch $=\frac{6}{48}$. No discharge seen in the canal; the membrana tympani still red and covered with dry crusts. Politzer inflation repeated. Patient ordered the following tonic to be taken three times daily: R.—Potas. iodid. grs. v; syr. ferri iodid. ♏x; syr. hypophos. co. ad ʒij.

Sept. 4. Tinnitus less and very slight now. Hearing distance remains about the same. No discharge in the canal; the membrana tympani less congested and the redness disappearing.

28th. No trouble now with the ear except an occasional tinnitus and no discharge. Hearing distance, Watch $=\frac{18}{48}$. The membrana tympani des-

quamating; still somewhat reddened and slightly retracted. Politzer inflation.

It will be seen from these cases that cold-water bathing may be the cause of only a slight inflammation of the canal or membrana tympani, or the middle ear may be involved, causing perforation of the drum-head, and in some cases leading to mastoid disease. As regards treatment, in severe cases in which the canal or membrana tympani is very much congested and angry-looking, leeching, or, what is better, a small cupping-glass, if applied to the previously scarified parts in front of the tragus, will very often relieve the pain at once, and cut short the inflammation. Aconite should also be given, especially if there is any fever, and the bowels opened by the administration of a saline cathartic. When the mastoid becomes involved, the cupping-glass should be applied over the mastoid process or just below the auricle. Where there is bulging of the drum-head, causing severe pain, paracentesis should be performed. It is surprising how the pain and inflammation in some cases yield immediately to the local abstraction of blood. I prefer wet-cupping to leeching, if the physician can apply the cupping-glass himself, as it is always at hand, the quantity of blood abstracted can be entirely regulated, and it is much more agreeable to the patient. Patients very seldom, if left to themselves, apply leeches properly to parts about the ear.

In mild cases of otitis media, without perforation of the drum-head, attention to the general health and inflation of air by Politzer's method, are frequently all that is required to effect a cure.

In other cases, where the discharge appears, or the membrana tympani is ruptured, or the mastoid becomes involved, the treatment does not differ from that recommended in similar cases from other causes.

MEDICAL PROGRESS.

ON THE TREATMENT OF NASAL DIPHTHERIA.—REIERSON, of Copenhagen, gives an account of the treatment lately employed with good results in the Copenhagen Fever Hospital in cases of nasal diphtheria. The serious character of this form of diphtheria having been experienced (the author thinks that the pituitary membrane absorbs the micrococci of diphtheria much more quickly than any other mucous membrane, thus giving rise to serious general symptoms) and the usual treatment, by which either the false membranes were removed with forceps or antiseptic liquids injected in the nose, having proved unsatisfactory in results, or impossible in practice, the treatment by medicated bougies has been adopted. They are made according to the following formula:

Cocain. muriat. . . .	$\frac{1}{8}$ to $\frac{1}{5}$ grain.
Boric acid	15 grains.
Amyli Gummi arab pulv. } . . .	āā 1½ grains.
Glycerini	quantum satis.

The length of the bougie for grown-up persons and big children is three and a half inches, the diameter one-fifth of an inch; the same diameter will do for quite small children, the length being only a little shorter, but these bougies contain only $\frac{1}{12}$ grain cocaine (or even less for quite small children) and 10 grains boric acid each. They ought to be stiff and pointed at one end. They are introduced easily and cause hardly any pain or bleeding; one is applied to each inferior meatus, and ought to reach as far as the naso-pharynx. When they are melted, the passage through the nose is often re-established at once, and the mucus and the false membrane are now easily removed by syringing through the nose; but, if necessary, the introduction of the bougies is repeated, one hour being the usual time for them to melt thoroughly. The cocaine acts partly by reducing the swelling, and partly by decreasing the irritation caused by the boric acid, which acts like permanent antiseptic irrigation.—*Journal of Laryngology*, Jan. 1887.

RECENT OBSERVATIONS ON URINE-TESTING.—In an article in the *British Medical Journal* of January 8, 1887, DR. GEORGE JOHNSON speaks as follows, regarding some interesting points in the examination of urine: "My son has been engaged in an elaborate investigation of the reducing agent which is always present in normal urine. The results he will shortly publish in detail. Meanwhile, I may state that he has conclusively proved: 1. That not a trace of glucose is to be found in normal urine; 2. That, as uric acid has no reducing action on picric acid, the chief, if not the sole, constituent of normal urine which reduces picric acid in the presence of potash is kreatinine. He has discovered a simple means of precipitating kreatinine from the urine in combination with a metallic salt, and by a process which has no effect upon any glucose that may be present. A specimen of normal urine which has been thus treated ceases to give the red color when boiled with picric acid and potash, but if, before the separation of the kreatinine, glucose be added to the urine in the proportion of a grain to the ounce, the sugar is found undiminished after the kreatinine has been removed.

"*Urine of Patients who are taking Salicylate of Soda.*—I have often found that the urine of patients who are taking salicylate of soda, when boiled with picric acid and potash, gives a deeper red color than is quite normal, the color being equal to that which would result from the presence of from one to two grains of glucose per ounce. Fehling's solution is also reduced, as it would be by a small amount of glucose. My son has for some time been investigating the nature of this reducing agent. He has ascertained that it is neither glucose nor an excess of kreatinine. It is probably due to some product of metabolism of the salicylate of soda, the precise nature of which remains to be ascertained. The salt itself has no reducing action on either picric acid or cupric oxide.

"*The Potassio-mercuric Iodide Test for Albumen is Fallacious.*—The Albumen Tests Committee of the Clinical Society, in their report, published in the last volume (xix.) of the *Transactions*, state: 'That a solution of potassio-mercuric iodide with citric acid, particularly when used after Heller's method, gives the most delicate and clearly marked reaction.' It is very noteworthy that the committee make no mention of the fact which has often been recorded, and which must now be pretty generally known, that this test causes an opalescence, not to be distinguished from a slight albuminous precipitate, in every normal urine. This reagent appa-

rently precipitates, not only mucin, but also some other ingredient of normal urine. For it is found that when the mucin in a normal specimen has been precipitated by citric or acetic acid, and then separated by filtration, the addition of the potassio-mercuric iodide to the clear urine causes a further precipitation and opalescence. It is obvious, therefore, that this reagent, if relied upon as a test for a minute trace of albumen, would be seriously misleading."

POTASSIUM PERMANGANATE IN AMENORRHŒA.—DR. MARSHALL, of San Francisco, after employing this drug in fifty cases of amenorrhœa, has arrived at the following conclusions:

1. The permanganate acts satisfactorily in about seventy per cent. of "selected cases."

2. It should be administered one or two hours *after* eating.

The disagreeable action on the stomach may be relieved by combining it with the following:

Oxalate of cerium	1 grain.
Hydrochlorate of cocaine . . .	$\frac{1}{8}$ grain.
Subnitrate of bismuth . . .	5 grains.
Powdered ipecac	$\frac{1}{60}$ grain.

The writer also states that this drug has a marked tonic effect, and generally causes mental exhilaration. —*Canadian Practitioner.*

MANAGEMENT OF SIMPLE CONSTIPATION.—SIR ANDREW CLARK gives the following instructions for the management of simple constipation.

1. On first waking in the morning, and also on going to bed at night, sip slowly from a quarter to half a pint of water, cold or hot.

2. On rising, take a cold or tepid sponge bath, followed by a brisk general towelling.

3. Clothe warmly and loosely; see that there is no constriction about the waist.

4. Take three simple but liberal meals daily; and, if desired, and it does not disagree, take also a slice of bread and butter and a cup of tea in the afternoon. When the tea is used it should not be hot or strong, or infused over five minutes. Avoid pickles, spices, curries, salted or otherwise preserved provisions, pies, pastry, cheese, jams, dried fruits, nuts, all coarse, hard, and indigestible foods taken with a view of moving the bowels, strong tea, and much hot liquid of any kind, with meals.

5. Walk at least half an hour twice daily.

6. Avoid sitting and working long in such a position as will compress or constrict the bowels.

7. Solicit the action of the bowels every day after breakfast, and be patient in soliciting. If you fail in procuring relief one day, wait until the following day, when you will renew the solicitation at the appointed time. And if you fail the second day, you may, continuing the daily solicitation, wait until the fourth day, when assistance should be taken. The simplest and best will be a small enema of equal parts of olive oil and water. The action of this injection will be greatly helped by taking it with the hips raised, and by previously anointing the anus and the lower part of the rectum with vaseline or with oil.

8. If by the use of all these means you fail in establishing the habit of daily or of alternate daily action of the bowels, it may be necessary to take artificial help And your object in doing this is not to produce a very copious dejection, or to provoke several smaller actions; your object is to coax or persuade the bowels to act after the manner of nature by the production of a moderate more or less solid formed discharge. Before having recourse to drugs, you may try, on waking in the morning, massage of the abdomen, practised from right to left along the course of the colon; and you may take at the two greater meals of the day a dessertspoonful or more of the best Lucca oil. It is rather a pleasant addition to potatoes or to green vegetables.

9. If the use of drugs is unavoidable, try the aloin pill. Take one half an hour before the last meal of the day, or just so much of one as will suffice to move the bowels in a natural way the next day after breakfast. If it should produce a very copious motion, or several small motions, the pill is not acting aright; only a fourth, or even less, should be taken for a dose. When the right dose has been found it may be taken daily, or on alternate days, until the habit of daily defecation is established. Then the dose of the pill should be slowly diminished, and eventually artificial help should be withdrawn. The aloin pill is thus composed: ℞.—Aloinæ, ½ gr.; extr. nucis vom., ½ gr.; ferri sulph., ½ gr.; pulv. myrrhæ, ½ gr.; saponis, ½ gr.; fiat pil. 1. If the feces are dry and hard, and *if there is no special weakness of the heart*, half a grain of ipecacuan may be added to each pill. Should the action of the pill be preceded by griping and the character of the action be unequal, half a grain of fresh extract of belladonna will probably remove these disadvantages. If the aloin pill gripes, provokes the discharge of much mucus, or otherwise disagrees, substitute the fluid extract of cascara sagrada, and take from five to twenty drops in an ounce of water either on retiring to bed or before dinner. And when neither aloin nor cascara agrees, you may succeed by taking before the mid-day meal two or three grains each of dried carbonate of soda and powdered rhubarb.

The exact agent employed for the relief of constipation is of much less importance than its mode of operation. If, whatever the agent may be, it succeeds in producing after the manner of nature one moderate formed stool, it may be, if necessary, continued indefinitely without fear of injurious effects. But, treated upon physiological considerations, I have the belief that in the great majority of cases simple constipation may be successfully overcome without recourse to aperients.—*Lancet*, Jan. 1, 1887.

DIAGNOSIS OF CANCER OF THE STOMACH BY THE CHEMICAL EXAMINATION OF ITS SECRETIONS.—DR. DEBOVE, in the *Gazette Hebdomadaire* of December 31, 1886, reports a case in which the diagnosis of cancer of the stomach was impossible without a chemical examination of its contents.

In cases which were not cancerous hydrochloric and lactic acids or hydrochloric acid alone was found, with very rare exceptions; in cancerous cases it was never detected.

The case reported was that of a man, aged thirty-four, who had suffered from progressive enfeeblement, loss of appetite, and gastric pain for nearly a year. Persistent vomiting of food and mucus occurred later.

On entering the hospital the patient had no tumor, he had never vomited blood or passed blood in his stools; he presented no appearance of especial cachexia.

Washing out the stomach, artificial alimentation, the alkalies in large doses, and strictly regulated diet produced no effect.

Examination of the contents of the stomach showed no hydrochloric acid, but always the presence of lactic acid.

The case was closely watched, and nearly a year after the beginning of his disease a tumor, as large as a small egg, was discovered in the epigastrium, a little to the left of the median line; the diagnosis of cancer was considered assured,

The examination of the contents of the stomach was made as follows: The liquid was filtered as rapidly as possible; in the test for hydrochloric acid gentian-violet (1:5000) gave a blue color in the presence of traces of the acid.

Perchloride of iron gave a yellow color when lactic acid was present; a mixture of three drops of iron and ten drops of a solution of carbolic acid resulted, when added to fluid containing lactic acid, in an amethyst or yellowish-blue color.

BICHLORIDE OF MERCURY SOAP.—GASSELER, of Dresden, has prepared a soap with bichloride of mercury and an excess of fatty acids, which can be kept for a long time, and promises to be very useful, not only in the treatment of skin diseases, but also as a disinfectant.

In the *Med. Forschritt*, JONE has given his results in experiments made with a soap containing 1 per cent. of mercurial. He has seen in anthrax the filaments containing the spores lose their infectious properties in thirty seconds, and bacilli were also destroyed very rapidly, The practical advantages of a disinfectant soap are apparent.—*Les Nouveaux Remèdes*, December 24, 1886.

RECENT MEDICINAL CHEMICALS.—At a recent meeting of the Deutsche Naturforscher und Aerzte at Berlin, Mr. E. Merck exhibited a large number of the products of his chemical works, and published a pamphlet containing notes on some of the more important of them, from which we make the following abstract:

Æthoxy-caffeine.—This compound is produced by substituting the group C_2H_5O in place of one hydrogen in caffeine. It forms white, needle-shaped crystals, melting at 140° C., very little soluble in alcohol or ether, insoluble in water, and of strongly basic properties.

Dujardin-Beaumetz (*Journ. de Ph. et Chim.*, 1886, 611) considers it a pure narcotic, particularly useful in headache. It is generally administered in solution in water, by the intervention of salicylate of sodium. Dose 4 to 16 grains per day; in single doses of 4 to 8 grains, or in divided doses of 1½ grains.

The same author has also combined it with cocaine as follows:

Æthoxy-caffeine	4 gr.
Salicylate of sodium . . .	4 gr.
Hydrochlorate of cocaine . .	1½ gr.
Linden-flower water . . .	2 fl. oz.
Syrup	½ fl. oz.

Agaricin ("purissimum, Merck").—The efficacy of this substance (really agaric acid) in relieving the sweating of consumptives has been demonstrated by J. M. Young, Seiffert, and Pröbsting in 1882. It is given in doses of $\frac{1}{12}$ to ⅙ grain in pills, to which some Dover's powder is usually added, since agaricin often produces loose bowels, sometimes accompanied by violent abdominal pains. Young recommends the following combination:

℞.—Agaricini	8 gr.
Pulv. ipecac. et opii . . .	120 gr.
Altheæ pulv.,	
Mucilag. acaciæ . . .	āā 60 gr.

To be made into 100 pills; 1 or 2 pills to be taken at night.

The hypodermatic administration of agaricin causes pain.

Considerable quantities of Merck's agaricin have been used in Bellevue Hospital for relieving the night-sweats of consumptives, or other patients suffering from the same cause, with uniform success. It is usually given in combination with atropine and aromatic sulphuric acid:

℞.—Agaricini (Merck) . . .	10 gr.
Atropinæ sulphatis . . .	1 gr.
Acidi sulph. arom. . . .	1200 ♏.

Dissolve and filter. *Dose:* 10 minims, containing $\frac{1}{10}$ grain of agaricin, $\frac{1}{120}$ grain of atropine sulphate, and 10 minims of aromatic sulphuric acid. To be administered in syrup or simple elixir.

Aloin.—Merck's aloin is "barbaloin"—that is, it is the aloin extracted from Barbadoes aloes.

May be used in doses of 2 to 4 grains.

Codeine Phosphate.—The introduction of this salt has rendered the hypodermatic use of the alkaloid possible. It is recommended highly in diabetes, in doses of 1 grain three times daily, increasing every week by 1 grain, until about 9 grains are reached. Cod-liver oil should be given at the same time (Smith; Hermann). In morphinism, Leppmann recommends the alternate administration of one-third to seven-eighths grain of this salt, and eight grains of monobromated camphor.

Colchicin.—The pure crystallized principle is a powerful poison and must be used with caution. The dose, in gout and rheumatism, is $\frac{1}{120}$ to $\frac{1}{30}$ grain two or three times daily. Not to be recommended for subcutaneous use.

Colocynthin, the glucoside of colocynth, is soluble in water and alcohol. When administered internally, or *subcutaneously*, it acts as a purgative, but the hypodermatic employment is painful. Injected into the rectum it causes purging within one hour. Dose, internally, 1½ to 6 grains; hypodermatically, ⅙ to ⅓ grain, dissolved in water. Possibly, when combined with cocaine, the hypodermatic injection may be rendered painless. It would be very advantageous if it could be used in this way, as there are many cases where it would be desirable to be able to administer a purgative hypodermatically.—*American Druggist*, January, 1887.

COCAINE IN SEA-SICKNESS.—OTTO has treated this most disagreeable of maladies by an aqueous solution of hydrochlorate of cocaine, 1 to 10, of which five drops are given three or four times daily on a bit of ice.—*Gazette Hebdomadaire*, December 17, 1886.

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OSTEOPLASTIC RESECTION OF THE FOOT.

AMONG the operations of excision at the ankle-joint, one of the most ingenious is that which was first practised in 1871, by WLADIMIROFF, and brought into general use ten years later by MIKULICZ, who made certain improvements in its technique. This operation was called "artificial pes equinus," by Wladimiroff, and "osteoplastic resection of the foot," by Mikulicz. The former of these names indicates the result of the operation; the latter, rather vaguely indicates its character. It consists essentially in a resection of the lower ends of the tibia and fibula with the whole of the astragalus and calcaneum, and the posterior portion of the cuboid and scaphoid bones, followed by placing the cut surfaces of the scaphoid and cuboid bones in contact with those of the tibia and fibula, and closure of the wound. HABERERN proposed suturing the approximated bones, in order to secure better union, and this suggestion was carried out by SKLIFOSSOWSKY in 1882, and by FISCHER in 1884.

The incisions practised by Wladimiroff differ somewhat from those used and recommended by Mikulicz, which have been judged to be an improvement upon those proposed by the originator of the operation. In Mikulicz's operation the patient is placed prone upon the abdomen, and an incision is carried across the sole of the foot to the bones, from the tubercle of the scaphoid to just behind the base of the fifth metatarsal bone. From each end of this incision another is carried upward to the corresponding malleolus, and between the upper ends of these a fourth incision is carried across the back of the ankle-joint, dividing the tendo Achillis. The ankle-joint is next opened and the astragalus and calcaneum dissected out from behind. The lower ends of the tibia and fibula and the posterior surfaces of the scaphoid and cuboid bones are then sawn off, the foot is placed in a position of pes equinus, with the cut bone surfaces in contact; and the wound is closed. Sutures or pegs may be used to fix the bones in contact, or they may not, as the operator thinks best. In the cases in which this last step has been taken the results have not been any better than in those in which it has been omitted, although theoretically there can be no question that it is a proper one.

This operation comes into rivalry chiefly with the amputations of Syme and of Pirogoff, when the latter seem to be indicated in cases of serious injury, or of caries of the astragalus and calcaneum. Mikulicz did his first operation in 1880 for an intractable syphilitic ulcer of the foot; Remsen did one in 1884 for deformity after a complicated and neglected fracture at the lower end of the leg; Niehans operated in 1884 (?) for an injury of the ankle. All the other operations, to the records of which we have access, were done for caries.

In a recent paper in the *Archiv für klinische Chirurgie*, Bd. xxxiii. Heft 3, 1886, ZESAS has collated the statistics of nineteen operations by the method of Wladimiroff or of Mikulicz, in all of which, with one exception, the functional result was excellent. In one case gangrene of the foot followed the operation, and it was necessary to amputate in the lower third of the leg. Out of sixteen cases operated upon for caries, speedy recurrence is noted in four; so that the hope that this operation would furnish a better protection than a less radical one has not been fulfilled so far.

The special merit of Mikulicz's operation consists in the functional result, which is better than that following a Syme's or a Pirogoff's amputation. Perhaps it might be better still if care were taken to spare the tendon of the peroneus longus muscle and if the tendo Achillis were sutured to the periosteum of the scaphoid and cuboid bones. This, so far as we know, has never been attempted, and it might prove more difficult in practice than it seems to be in theory. Nevertheless, we offer the suggestion for the consideration of those who may hereafter undertake the Wladimiroff-Mikulicz operation.

RECTAL INJECTIONS OF GAS.

THE treatment of chronic pulmonary diseases is of daily interest to the practitioner, who welcomes eagerly new methods which hold out a hope of relief to troublesome symptoms, or of cure in a long standing and obstinate case. New remedies, like new servants, seem always to do well at first, but, with the one as with the other, it takes time before the good and bad qualities can be discovered. A

few years ago we were using respirators and inhalers in the treatment of phthisis and chronic bronchial troubles, and the journals were filled with reports of wonderful results obtained by this method. Ask the nearest pharmacist and he will tell you that now the sales of respirators in a year are not equal to what they were in a week, and that practically the method has been abandoned. Meanwhile the fight goes bravely on, and as the enemy has not yielded to the attack *a fronte*, the tactics have changed, and we are asked to assault him *a tergo*.

It has long been known that an interchange takes place between the gases of the blood in the intestinal capillaries and those contained in the bowel. Some time ago BERNARD and CORNIL called the attention of the French Academy to the fact that gases injected into the bowel pass to the lung and are exhaled. Relying upon this physiological fact, BERGERON, of Lyons, and several other French therapeutists have advocated the treatment of chronic pulmonary diseases by the rectal injection of gases. Already the reports of the success in chronic bronchitis, asthma, and phthisis, are so favorable that the method is likely to come into very general use, and we may soon expect here to have a Wolff's bottle by the side of each phthisical patient, who will take his medicine thrice daily through a rubber tube and a rectal canula. Indeed, the plan has been for some time in use at the Philadelphia Hospital.

At the Société de Thérapeutique there has recently been a discussion on the subject, and from the report in the *Gazette Hebdomadaire*, No. 51, 1886, we glean the following information. DUJARDIN-BEAUMETZ stated that he had twenty-five patients under the treatment, and preferred the sulphuretted hydrogen to the carbonic acid, or to the sulphuretted or carbonated waters. The carbonic acid alone always caused colic without any improvement, but the addition of sulphuretted hydrogen caused a diminution of the cough and of the expectoration, while the sleep returned and the appetite improved. These good effects were not always obtained until after treatment had been employed for some time. He had also used eucalyptus and iodoform, but without benefit. In bronchial catarrh the improvement was in some cases most marked and rapid. PAUL recommended a sulphur water charged under pressure with carbonic acid. In siphons this is readily available, and the gas is allowed to enter the bowel until there is a feeling of tension and heat, and a tendency to expel the canula. About one quart of gas is injected at each sitting; as much as two quarts usually causes dilatation of the transverse colon and painful tympany.

The general opinion seemed favorable to a further trial of the method. It was remarked that the patients complained of not receiving any medicine under this plan of treatment, and they were not satisfied with the injections alone.

FATAL POISONING BY WATER-GAS.

THE Troy cases of poisoning by the inhalation of water-gas are likely to attract widespread attention because of the recent largely extended use throughout the United States of this gas for fuel and illuminating purposes, and we are fortunate in being able in this issue to lay before our readers Dr. Bontecou's report of their medical history.

The danger of water-gas is greatly increased by reason of its having no perceptible odor, and the Troy catastrophe shows that while a house may be unconnected with the gas mains its occupants may not be secure from its poisonous influence, and that, while ignorant that they are inhaling it, they may gradually and unconsciously pass into a narcotic sleep from which they may never awake.

The liability to the leakage of gas from the mains, and its filtration through the soil into houses, is increased in winter by the more frequent breakage of pipes, and also, perhaps, by the closing of windows and the artificial heating of rooms, incident to that season, which invite the entrance and accumulation of the escaping gas.

The inhalation of water-gas proves poisonous through the presence of carbonic oxide. The symptoms noticed are dizziness, faintness, severe headache, with sense of constriction, epigastric pain, vomiting, stupefaction, and, finally, coma and death. The chances of recovery decrease in proportion to the length of time the gas has been inhaled, and the blood has become saturated with it.

The practical lesson to be learned wherever water-gas is used, is that on the earliest occurrence of any one of these symptoms of poisoning the atmosphere of the room should be thoroughly changed immediately by opening the windows, and if on their closure these symptoms reappear, it may be reasonably suspected that there is an escape of gas in or near the house. When the symptoms of narcotic poisoning are established, cold affusions, stimulants, venesection, and artificial respiration are demanded, in addition. In cases in which the exposure to the gas has continued for some hours, and coma is pronounced, these measures are likely to prove unavailing, and transfusion, or refusion should, also, be employed. This latter measure, which consists in withdrawing the poisoned blood, oxygenating and defibrinating it, and then returning it to the circulation, has given, in some cases, encouraging results, as shown by Dr. Halsted, in a valuable paper which appeared in THE MEDICAL NEWS of Dec. 8, 1883.

We are glad to learn that the manufacture of this gas has been suspended at Troy until some method

can be devised to give to it an odor by which its presence may be detected, and it may thus be robbed of its greatest danger.

A REMARKABLE OUTBREAK OF TYPHOID FEVER.

BROUARDEL has communicated to the Academy of Sciences the details of a localized outbreak of typhoid fever in which it is claimed that the specific bacillus was found in the contaminated water.

The facts, as given in the *Gazette Hebdomadaire*, No. 51, 1886, are briefly as follows: During the months of August and September, twenty-three persons had occupied three contiguous houses at Pierrefonds, of whom twenty were attacked with typhoid fever. Four members of one family died. Insanitary conditions of the most aggravated kind existed. The water supply was from shallow wells filled by percolation from a neighboring stream; one cesspool was situated at a distance of thirty feet from a well, the other at a distance of sixty-five feet. The soil was light and porous, and the level of the water was below that of the cesspools. The interesting feature of the investigation was the detection, by Chautemesse, Director of the Bacteriological Laboratory of the College of France, of the bacilli regarded as the specific agent of typhoid fever. On October 18th they were present in large numbers in the water supplied to the house in which the four deaths had occurred. On October 29th there were fewer, and on November 21st none could be found. In the other wells similar organisms did not exist.

To demonstrate the identity of the bacilli found in the water with those of the typhoid patients, the spleen of one was punctured with a sterilized trocar on the tenth day of the illness, and in cultures of the material colonies developed in the same morphological and biological characters as those obtained from the well water. The coloration and sporulation of the bacilli were identical.

This is not the first time that the typhoid bacillus has been found in drinking water, but we do not know of an instance in which the details have been so carefully worked out as in the Pierrefonds epidemic.

EXPERT FEES IN OHIO.

IT is likely that the question of special compensation for expert testimony will soon be brought to an issue before the courts of Ohio, ultimately even before the Supreme Court itself, through Dr. F. H. Darby, of Morrow, who was recently summoned by the State as an expert in a murder case. He refused to answer the following question unless paid a fee as an expert: "State whether in wounds like this there would be immediate gaping, or would the lips of the wound for a time remain in contact or nearly so?" The judge declined to grant the fee asked, because he held that there was no law for it, and Dr. Darby, for his refusal to reply, was sent to jail for contempt, and he was only released, after several days' confinement, on his own recognizance. We understand his case will be made a test one.

Dr. Darby based his refusal on the ground that he was asked to give expert testimony, and, as it was not claimed that he had any personal knowledge of the case, the issue is a square one. In some similar cases which have been decided in other States, the physician was a witness as to facts, and refused to answer when questioned as to matters of opinion. In several such cases the Court has not sustained the physician, refusing to discriminate between a pure question of fact and an incidental one of theory.

In the State of Iowa the law reads that "Witnesses called to testify only to an opinion founded on special study or experience in any branch of science, or to make scientific or professional examinations, and state the results thereof, shall receive additional compensation, to be fixed by the Court, with reference to the value of the time employed, and the degree of learning or skill required." North Carolina, Rhode Island, and Minnesota have similar laws.

The sympathies of the profession are with Dr. Darby in the important stand he has taken, and we hope that he may receive material aid in its prosecution, and that his case will reach a favorable decision.

THE DEATH OF EDWARD LIVINGSTON YOUMANS, M.D., in New York City, on January 18th, occurred from pulmonary tuberculosis, supervening upon a severe pneumonia of two years ago. He was born in 1821, and graduated in medicine at the University of Vermont. He never followed medicine as a profession, but adopted that of a lecturer upon scientific subjects, and became the author of numerous books on those subjects. His name was widely known as the editor of the *Popular Science Monthly*, with which journal he was identified from its inception in 1871.

DR. WILLIAM STEVENSON ROBERTSON died at his birth-place, Muscatine, Iowa, on January 20th, aged fifty-six years. He was President of the Iowa State Board of Health, and Professor of the Theory and Practice of Medicine in the Iowa State University.

WE have upon several occasions, in giving the statistics of ovariotomy in Italy, referred to the work of Prof. d'Antona, of Naples, who now probably stands, in number of cases, at the head of the ovariotomists in that country. Of 48 completed and reported ovariotomies, up to 1885, for the removal of single and double cystomata, but 7 had

resulted fatally, and by his last report of 13 cases, there was no death. From a tabular record prepared in September, 1886, we learn, that he has performed the following operations, with their appended results.

	Cases.	Recovered.	Died.
Ovariotomies for unilateral and bilateral sarcomata	2	2	
Abdominal hysterectomy for cancer, by Freund's method	1	...	1
Vaginal hysterectomy for cancer	5	5	
Supravaginal hysterectomy for cancer, myofibromata	11	7	4
Myotomy for myofibromata, "periuterine and broad ligament"	4	3	1
Laparotomy for removal of "epiploic adeno-sarcoma"	1	1	
Laparotomy for removal of peritoneal cysts	1	1	
Laparotomy for removal of subperitoneal sarcomata	3	2	1
Nephrectomies	9	5	4
Nephrolithotomy	1	1	
	38	27	11

THE MEDICAL SOCIETY OF KING'S COUNTY, N. Y., held its annual meeting at Brooklyn, on January 16, 1887, and elected the following officers for the ensuing year:

President.—William Wallace, M.D.
Vice-President.—A. Ross Matheson, M.D.
Secretary.—C. Delavergne, M.D.
Treasurer.—W. B. Chase, M.D.
Librarian.—J. H. Hunt, M.D.

BARKER'S work on *Puerperal Diseases* and Emmet's *Gynecology* have recently been translated into German and published by Abel, of Leipzig.

PROFESSOR LUDWIG BANDL died during the first week of December, 1886, at Prague, where he had taken the Chair of Obstetrics and Gynecology made vacant by Breisky during the past summer. Graduated in 1867 at Vienna, he had been private docent, instructor in the Vienna Polyclinic, and Professor (extraordinary) of Gynecology in the University of Vienna. His writings upon *Rupture of the Uterus, and Its Mechanism*, and his article upon "The Diseases of the Tubes, of the Ligaments, of the Pelvic Peritoneum, and the Pelvic Cellular Tissue, including Extrauterine Pregnancy," in Billroth's *Hand-book on the Diseases of Women*, have made his name familiar. He was a popular and earnest teacher, and his studies regarding the uterine contraction-ring, which has borne his name, have excited much discussion among obstetricians.

THE Central Texas Medical Association recently held its second quarterly meeting, at which the President, Dr. F. M. Pitts, delivered an address, and Drs. W. L. Barber and H. W. Dudley read papers on typho-ma arial fever.

OWING to the fact that the American Medical Association will hold its annual meeting in Chicago, on June 7th to 10th next, thus conflicting with the date for the annual meeting of the Michigan State Medical Society, the Executive Committee have designated the 12th and 13th day of May next for the annual meeting of the State Medical Society.

SOCIETY PROCEEDINGS.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, January 6, 1887.

THE PRESIDENT, B. F. BAER, M.D., IN THE CHAIR.

DR. WM. GOODELL read a paper entitled,

A YEAR'S WORK IN OVARIOTOMY.

(See page 119.)

DR. PARISH cited a few instances of evil results following abdominal tapping for purposes of diagnosis or for relief from distention. In his first ovariotomy case, with the view of clinching the diagnosis, he aspirated and withdrew a few drachms of somewhat cloudy ovarian fluid. The patient presented some symptoms which in a few days became grave; pain in the tumor, rigors, rapid and feeble pulse, and high temperature. He operated during the existence of these symptoms, and found suppuration of the interior of the cyst and extensive anterior adhesions; both conditions doubtless dependent upon the aspiration; the patient recovered.

A few years ago a well-known medical gentleman of this city aspirated a tumor supposed to be a multilocular ovarian cyst. Though the fluid was stated to verify the diagnosis, the patient miscarried in one or two days of twins at about the fifth month, and the tumor proved to be simply a uterus enlarged by means of a multiple pregnancy. He recently saw in the Philadelphia Hospital a shocking case of labor, in which active labor pains began one week previous to her admission to the hospital. No urine had been voided for several days. Pregnancy was denied by the patient and her friends, and was not recognized by two physicians. The woman was small and deformed, and in the abdomen were two fluctuating tumors, one due to a distended bladder, the other the uterus. Aspiration was resorted to in both tumors, a procedure that was not only unnecessary for diagnostic purposes in this case, but which would probably have been highly detrimental to the patient, had not the neglected and protracted labor already determined a rapidly fatal result. Though tapping for relief and especially for diagnosis is less frequently resorted to than was the case a few years ago, yet even now it is too frequently done.

In reference to the development of cancer or sarcoma, after the removal of seemingly benign ovarian tumors, he recently saw an example in a patient operated on by Dr. Hickman and himself. A large cyst of one ovary and a small one of the other, both free from the appearance of malignancy, were removed,

and the patient made a tardy recovery. In about a year sarcomatous growths developed in the neck and axilla, and a large one in the abdominal wall of the left lumbar region. The patient died a few weeks ago, and the autopsy was made by Dr. Morris Longstreth; and though the sarcomas referred to were present, there was no intrapelvic disease. An interesting feature was the total disappearance of the ligature of iron-dyed-silk with which the pedicles and several vessels were secured about eighteen months previously.

DR. H. A. KELLY stated that while simple tapping was often in no way injurious, it was also often productive of grave injury, and one of his own cases illustrated this point very well. The patient having a cyst weighing 100 pounds, was tapped in the left iliac region by a notorious homœopathic surgeon. She had previously suffered from pressure symptoms. From now on she suffered from severe inflammatory pains around the puncture, and at the operation the extensive dense adhesions at this point constituted the chief difficulty. She is now well, more than a year since the operation. It is a cause for mutual congratulation for American operators, that their results are becoming so good. The whole credit of this lies in the thorough use of antiseptic agents and the rendering the field of operation completely *aseptic*.

He believes, too, that our cases are more difficult than those being operated on abroad. The tumors we operate upon are older, and with the increasing age of an ovarian tumor occur many changes detrimental to the patient, depression of vitality from pressure symptoms, diversion of so much albumen from the system at large, surcharge of the emunctories, as well as adhesions and unfavorable changes within the tumor itself. Keith's dressing of a strongly carbolized glycerine has rendered excellent results in Dr. Kelly's hands in at least twenty cases.

DR. GOODELL, in answer to a question by Dr. Baer, said he operated during menstruation merely from pressure of time on the part of the patient, and little or no effect was produced on the discharge by the operation.

DR. JOSEPH PRICE, in commenting upon some points alluded to in Dr. Goodell's paper fearing the contaminated atmosphere of a general hospital, cited the statistics of two hospitals: Special Department of Birmingham General Hospital and Birmingham Hospital for Women, covering a period from Jan. 1878, to Sept. 1885.

Special Department of General Hospital, ovariotomy 35 cases, 11 deaths; mortality, 31.4 per cent.

Birmingham Hospital for Women, ovariotomy 268 cases, 19 deaths; mortality, 7.1 per cent.

During the same period the total number of intra-abdominal operations in the Special Department of General Hospital, 85 cases, with 21 deaths; mortality, 24.7 per cent.

Birmingham Hospital for Women, 632 cases with 49 deaths; mortality, 7.7 per cent.

One point as to the value of the spray, quoting from Keith's report of cases treated in the Royal Infirmary, Edinburgh.

Carbolic acid spray cases:

Ovariotomy, 21 cases: 18 cured, 5 died.
Hysterectomy for fibroid, 2 cases: 2 cured.
Battey's operation, 1 case: 1 died.
24 cases with 4 deaths; mortality, 16.66 per cent.

Boro-glyceride spray cases:

Double ovariotomy, with hysterectomy, 1 case died.
Hysterectomy for fibroid, 1 case recovered.
Result with boro-glyceride spray, 2 cases with 1 death.

No spray:

Ovariotomy, 47 cases: 46 cured, 1 died.
Hysterectomy for fibroid, 7 cases: 7 cured.
Battey for fibroid, 1 case, cured.
Interstitial pregnancy, 1 case, cured.
56 cases with 1 death.

Mr. Keith says: "No cases of serous cysts of the broad ligament were operated on. These all were treated by tapping, and none of them have returned." One such case that Dr. Price saw died a few days later. Of Dr. Keith's cases, one-half had no adhesions.

DR. MONTGOMERY considered Dr. Goodell's success gratifying, especially after tapping. A patient came to him one month after tapping. She had a high pulse, septicæmia, large adhesions to viscera, etc., putrid clots in the tumor, and died on the fifth day with a temperature of 105°. He does not approve of tapping broad ligament cysts. One patient with such a tumor was tapped seven times. He afterward removed the tumor, and did not have a single vessel to tie. In this case, the peritoneum had been pushed up by the tumor, and was not opened until late in the operation.

DR. GOODELL made a few remarks on the subject of statistics. Dr. Keith's have improved, not because he has given up the spray, but because he has grown to his work. Dr. Goodell will give up the spray because it is an intolerable nuisance. As to the question of malignancy of ovarian tumors, it has been said that "all ovarian tumors are malignant, and should be so treated." This is too sweeping; but the tumors should in all cases be removed as soon as discovered.

DR. R. P. HARRIS desired Dr. Parish to report the present condition of the patient from whom he had removed the ovarian tumor exhibited by him before the Society, at its meeting on March 4, 1886, the day after the operation. Dr. Parish had requested Dr. Harris, who had seen her much more recently than he had, to report her condition. Dr. Harris stated that notwithstanding the fact that the tumor was largely solid, that it had grown rapidly, that the solid portion had an appearance of malignancy, and that there was a small morbid growth projecting upward from the fundus uteri, the lady was to all appearance a well woman. He saw her on December 26, when she claimed to have perfectly recovered her health and strength after a very prolonged convalescence. Her appearance and activity certainly indicated that her statement was correct. The uterine nodule must have been a fibroid, as, had it been cancerous, it must have materially developed in nine months. The future of this case will be of much interest.

DR. CHARLES MEIGS WILSON reported

THREE SUCCESSFUL TAIT OPERATIONS.

These cases are the first of a series performed without the use of carbolic acid solutions for instruments, and without the spray. Hydrant water, boiled for six hours, was used for the instruments and sponges in the first and second cases, and a solution of mercuric chloride, 1 to 5000, for like purposes in the third. The wounds in all three were dressed after the manner of Keith.

The incisions were less than two inches in length. More than three months has elapsed since the operation in each case before it has been reported. It has seemed best to publish the cases in this manner, because the vast majority of all cases recover without accident from the operation, and hence mere statistics of the healing of the wound amounts to little but evidence of individual skill. Statistics of the real relief afforded by the operation are what the profession needs in order to give the operation its just place in modern surgical procedures.

Case I. Myo-fibroma of the uterus.—This case first came under observation in July, 1886. She gave her history as follows: Miss McM., æt. thirty-two, nullipara. For the last sixteen months has had a rapidly growing tumor of the abdomen; menses profuse; catamenial intervals ten to fifteen days; for the past four months has rarely been free from bloody vaginal discharge. She was emaciated, anæmic, and alarmed about the constant bloody discharge. She had reflex pains, but no ovarian tenderness or pain. She was obstinately constipated, owing to the pressure of the tumor upon the rectum. She was found to have a large fibroid tumor of the fundus and anterior wall of the uterus. The enlarged uterus was incarcerated in the cavity of the pelvis and was very immobile. The sound entered the uterus seven and a quarter inches. Abdominal section was performed, September 20, 1886, with the assistance of Drs. E. Wilson, C. P. Noble, and D. Longaker. The tubes were as thick as the finger, they had thin walls, and were distended with blood. The ovaries were oversize, and the right one was cystic. The ligature slipped from the uterine end of the left tube, and before it could be secured there was free hemorrhage. The operation lasted forty minutes. Convalescence was retarded by abscess of one of the suture tracts. The patient made an excellent recovery. Present condition: Has lost no blood since the second day after the operation; appetite good, and is able to resume her occupation of seamstress; frequently walks two miles to her work: all pain has disappeared; has gained twenty-two pounds since the operation, December 20th. The sound entered the uterus three and a quarter inches; the tumor was greatly reduced in size.

Case II. Hystero-epilepsy.—Mrs. C., æt. thirty, primipara. Had always enjoyed good health until after the birth of her child, six years ago. She had been delivered with forceps, and the cervix and perineum had been badly torn. She was in bed nine weeks after the confinement. No clear history of her puerperal trouble could be obtained. She has had profuse catamenial discharges since. About six months after the birth of her child, she first commenced to have attacks of loss of consciousness, followed by epileptiform seizures at her menstrual periods. These gradually became so violent as to place her life in seeming jeopardy during their occurrence, and left her utterly prostrated. She had been in bed about twenty days out of every month for four years. Her epileptic seizures occurred only at her monthly periods. Everything that her medical attendant could think of had been done for her, and her family were about to place her in an insane asylum. The ovaries and tubes were removed October 3, 1886. The operation was an easy and simple one. The patient made a speedy recovery without any untoward symptoms. Present condition: She is now able to earn her living as a yarn picker, working full time; has had no discharge of blood; little or no pain; *and not one seizure since the day of operation.*

Case III. Tubercular pyosalpinx.—Miss E. R., æt. nineteen, nullipara. This patient was also operated upon on October 3, 1886. Since menstruation began, at fifteen years of age, she has had constant, dull, aching pain, deep seated in the pelvis. At her menstrual epochs "her agony has been unbearable." Menses have always been slight in quantity and regular as to time. She presented a badly nourished appearance. Physical examination showed marked evidence of general tuberculosis. In spite of this fact, and in view of her intense menstrual pain, oöphorectomy was deemed justifiable and was accordingly done. Both tubes were of the size of large Bologna sausages, and both ovaries were cystic. Tubes and ovaries were matted in a mass of adhesions, which rendered the operation very tedious, it lasting one hour and ten minutes. Microscopic examination of sections of the tubes showed colonies of the Bacillus tuberculosis. Both tubes were filled with a greenish pus which was very offensive. The recovery was complicated by an arthritis, the symptoms of which were so obscure as to render it difficult to say whether it was septic, rheumatoid, or hysterical. She eventually made a good recovery. Present condition: Her physician, Dr. Walter E. Bibby, of Kensington, Philadelphia, reports: "She is entirely free from pain; able to walk about, and to attend to light household duties. Under the use of cod-liver oil, malt, and alcohol her tubercular trouble seems to be making little or no progress." As her peritoneum showed evidence of tuberculosis, as an experiment, bichloride solution, 1 to 8000, was used to wash out the abdominal cavity.

In each case the abdominal cavity was thoroughly flooded with boiled water before it was closed. The drainage tube was not used. Uncarbolized Chinese silk ligatures and silkworm-gut sutures were used. No anodyne was given after the operation, and no food was given for thirty-six hours after operation.

DR. H. A. KELLY was particularly interested in the tuberculous tubes, and regretted that an examination of the uterine discharges had not been made, as it would almost certainly have established the diagnosis. As to the right to operate upon a patient having a cavity in the lung, no general rule can be laid down; every such case stands by itself, and much must be left to the judgment of the operator.

DR. BAER would hesitate for some time before operating in a case of general tuberculosis with a pulmonary cavity. He did not think tuberculosis could cause pyosalpingitis.

DR. KELLY remarked that at least two cases have been observed here and many more abroad, and it has been recently formulated by Prof. Hegar among the tubal diseases which may require operation.

DR. PARISH thought the general condition of the patient outside of the pulmonary disease should decide the question. Severe pain should be relieved, unless the patient had a very short time to live.

HYDROSALPINX.

DR. H. A. KELLY exhibited the tubes of a patient who had suffered from metrorrhagia over thirteen years.

She had been in five large hospitals in Philadelphia, without relief, and had faithfully tried every plan of treatment, systemic and per vaginam. The diagnosis of enlarged tubes was made before operation, and on removal with their respective ovaries, the tubes were found, one as large as a Bologna sausage, and the other a small sausage, with a limpid fluid. She has lost no blood since the metrostaxis following the operation, about six weeks ago.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, January 20, 1887.

THE PRESIDENT, A. JACOBI, M.D., IN THE CHAIR.

DR. J. H. RIPLEY read a paper on

THE VALUE OF QUININE AS AN ANTIPYRETIC IN PNEUMONIA.

The experiments on which his observations were based were commenced in 1877, at St. Francis's Hospital, New York, and since that time had been continued by successive house physicians acting under his direction. Although a much larger number were made, the experiments available for the purpose under consideration were 48 in number, and the patients who were the subjects of these, varied from 19 to 45 years of age. The plan carried out was to give quinine as early as possible in the course of the disease; but only in cases in which the temperature was at least 103°, and which were uncomplicated. Each patient was watched for several hours before the experiment was commenced, and all the observations of temperature were taken in the rectum. No experiment lasted less than four hours, and the majority were continued for from 12 to 15 hours. The time of day at which the quinine was administered varied; but when only a single dose was given in the twenty-four hours it was given in the morning. In 20 of the experiments a single dose of 20 grains was given, and in 8 a single dose of 40 grains. It was usually given in solution, but in some instances was used hypodermatically. In two of the patients there was no reduction of temperature whatever noted after the use of quinine, and in two a slight elevation occurred. The reduction of temperature effected by the quinine was always of short duration, and it was frequently less than an hour. The effect of the remedy on the pulse and respiration was not a constant guide to its effect on the temperature. It varied in different cases, but the pulse and temperature were usually reduced in frequency.

In about half the cases the temperature was lowered between one and two degrees under the use of quinine. In the other half, the reduction was less than half a degree. The gain thus made was never held for more than from two to four hours. In many cases the antipyretic effect was, no doubt, only apparent, and the reduced temperature was really due to natural causes.

The conclusion arrived at by Dr. Ripley was, that quinine is a feeble and uncertain antipyretic in pneumonia. But this is not all. It has a bad effect on the appetite and digestion, and not infrequently excites nausea and vomiting. In addition, it is liable to produce marked cardiac weakness, profuse cold perspiration, and profound nervous depression. Opisthotonos was noticed in one instance, and in many cases it caused epistaxis. In three cases the urine was examined before and after the ingestion of quinine in large doses; and in one, the urine, previously normal, was found to contain large quantities of albumen, hyaline casts, and renal mucus after the use of the drug. These bad effects, he thought, more than counterbalanced any good effects that could be attributed to it.

Moreover, he could not see that it had shortened the natural course of the disease in any case. In some instances the pneumonic consolidation had extended under its use. In general, he believed, that too much importance is, at the present day, attached to the reduction of temperature in febrile diseases. In typhoid and other fevers much better results had been obtained at St. Francis's Hospital since heroic measures for reducing temperature had been given up. That quinine has any effect in preventing cell migration, as alleged by certain authors, he thought was extremely doubtful. In conclusion, he expressed the opinion that large doses of quinine in pneumonia should be abandoned. If an antipyretic effect were desired, we possess much more efficient agents in antipyrin and salicylate of sodium.

DR. PUTNAM JACOBI said that of 100 cases of pneumonia in children of which she had notes, 59 were available for statistical purposes. In these the average age was two and a half years, and 7 deaths were known to have occurred. She spoke of the effect of quinine on the physical signs and on the fever, and said that no decisive results could be gathered from the cases. Five grains, night and morning, seemed as efficient as larger doses in children. The conclusion that she arrived at was that quinine is not to be relied upon as an antipyretic, and that it is an efficient remedy in the pneumonias of children only so far as it affects the morbid process present. It tends, she thinks, to limit the secondary extension of the disease.

DR. J. LEWIS SMITH said that as Dr. Jacobi's cases occurred in the out-door department of the Mount Sinai Hospital, it could not be known whether the quinine was vomited or not. This drug is exceedingly liable to excite nausea in children, and the best way that he had found to administer it was in connection with wild cherry bark. He was in the habit of administering one large dose with a view to preventing cell migration; after which he preferred to give it in doses of from one to one and a half grains every four hours. It is a useful tonic, and he thinks that it prevents secondary lesions.

DR. FRUITNIGHT said that the common practice had been to give quinine for almost everything; but since the introduction of other antipyretics he thought the tendency has been to discard this agent to a large extent. The reaction was like the swinging back of the pendulum, and he believed it the part of prudence to pursue a middle course. His experience with quinine as an antipyretic in pneumonia coincided with that of Dr. Ripley; but at the same time he intends to continue to use the drug in this disease, not for its antipyretic, but for its sustaining effect. To secure this it should be given in small doses. One great danger in pneumonia is cardiac failure, and in large doses quinine is supposed to have a tendency to produce

this. In small doses, however, no such effect is observed.

DR. F. A. CASTLE said that his experience fully bore out that of Dr. Ripley as to the uselessness of quinine in pneumonia. Ten years ago Beriz recommended it in large doses, giving as much as seventy grains in the twenty-four hours. Personally he had never carried it to this extent, but he had used it in as large quantities as the stomach would bear. He had found, however, that if the temperature was to be reduced by quinine, it must be at the expense of the nutrition of the patient. In the broncho-pneumonia of children, if carried beyond tonic doses, it had a bad effect on the stomach, and also tended to produce delirium. For the last five years he had almost entirely abandoned this remedy in pneumonia. As regards sustaining the heart, he thought we have a much more reliable agent than quinine in digitalis.

DR. C. F. BILLINGTON said that, like Dr. J. Lewis Smith, he had found quinine very apt to produce vomiting in children, and he had, therefore, found great satisfaction in giving it in the form of a suppository. In case any rectal or anal irritation is caused by this method, it can easily be entirely avoided by the use of a simple apparatus provided with a piston-rod, which can now be obtained for the purpose. By employing this the administration can be kept up for any length of time desired without the slightest inconvenience. He, therefore, considered the method of giving quinine by the rectum one of great practical value. In pneumonia he had been disappointed in quinine as an antipyretic, and he had also found that its use is attended with other bad results. In children the natural tendency is to recover, both in broncho-pneumonia and in ordinary pneumonia, and a large number of cases get well without any treatment at all.

DR. L. EMMETT HOLT said that of twenty cases of pneumonia in children treated by him with quinine or cinchonidia, in twelve the drug was given in sufficient doses and for a sufficient length of time to enable him to form some opinion of its action, and in nine it was a total failure so far as any effect upon the temperature was produced. He gave as much as sixteen to thirty grains a day to children from one to two and a half years old, and in two or three cases the temperature rose steadily after the quinine had been taken. He said that his own feeling was that, given in small doses it is useless as an antipyretic, and given in large ones it is dangerous. In high fever he had met with much better results from the judicious and continued use of the cold pack, and by this means he had been able to save some cases which were to all appearances entirely hopeless. In general, he was doubtful about the value of antipyretic treatment in pneumonia, unless the temperature were unusually high. For the past two years he had abandoned the use of quinine entirely in pneumonia, as a rule, as he found that it almost always produced vomiting or other bad results; and he had obtained as good, and better results, since he had given it up. It was, however, of very decided advantage in convalescence, and in protracted cases of broncho-pneumonia, if given in small doses.

THE PRESIDENT said that he had seen some marked changes in opinion in regard to quinine in New York during the last thirty years. At one time much was expected from the administration of half a grain to a grain a few times a day to adults, and of even smaller doses to children. It was true that a larger number of cases got well, but they were the kind of cases in which the natural tendency is to recovery. It is only in bad cases that we can really judge of the effect of any remedy. At that time he said he had gained a very great reputation for over-dosing by giving six, eight, ten, and twelve grains of quinine to children. Since then professional opinion had entirely changed, but he still adhered to the practice. He laid stress on the desirability of giving the drug at certain times of the day. It should usually be given in the morning, when the intermission occurred, and full doses might be given in two portions: say five grains at 8 o'clock, and five grains at 11 o'clock. If it did not produce an unpleasant effect upon the stomach, he would recommend that one full dose should be given in the morning. He thought that a good deal of the inefficiency of the remedy which had been spoken of was owing to the condition of the stomach arising from the febrile state, in consequence of which it did not absorb properly; so that it would not be digested. The same was true as regards administration by the rectum. If the quinine were given hypodermatically, however, in a short time a good effect would be observed. The temperature would go down to an extent that could not be produced by quinine administered in any other way. The preparation of quinine which he now used for this purpose was the carbamide, on account of its solubility, and he recommended a trial of this method.

It was not worth while to give quinine for its antipyretic effect unless the temperature was over 102°. It should, by no means. be given in every case of pneumonia, as only occasional cases require it. Antipyrin has an excellent effect, if the fever is very high. In protracted cases, in which resolution does not take place, much benefit can be derived from quinine in divided doses in the morning, with Dover's powder at night to secure rest.

DR. RIPLEY, in closing the discussion, said that in quite a large number of the cases referred to in the paper the quinine was given by hypodermatic injection; yet the result was practically the same as when given by the mouth. In many of the cases of prolonged pneumonia in children spoken of, he thought there was an associated pleurisy. In young subjects it is often difficult to recognize this. As to the preparation for hypodermatic use, he had employed the muriate in strong solution, and had found it answer very well. He had never produced anything more than cellulitis by the method; and this had not gone on to suppuration. In regard to the matter of antipyretics, he said that sixty cases of measles had occurred at an asylum with which he was connected, and that antipyrin had been resorted to at the onset in a number of them. It was apparent, however, that these cases did not do as well as those which were treated by the ordinary simple methods.

THE PRESIDENT remarked that it was not safe to use a concentrated solution in hypodermatic injections, and related a case in which a strong solution of the muriate of quinia was employed. The patient died, and at the autopsy the quinine salt was found deposited in the connective tissue, only the water of the solution having been absorbed.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, January 12, 1887.

THE PRESIDENT, J. SOLIS-COHEN, M.D., IN THE CHAIR.

DR. J. H. BRINTON made some remarks

ON THE USE OF WHALEBONE BOUGIES IN THE TREATMENT OF URETHRAL STRICTURES.

He stated his belief that in these instruments we have an efficient mode of treating stricture, provided they be properly constructed, and skilfully manipulated. As he has never been quite satisfied with the whalebone filiforms of the shops, he makes his own, and with these he has experienced comparatively little difficulty in treating stricture, and in relieving obstinate cases of retention. His experience has convinced him that all organic urethral strictures of non-traumatic origin are pervious to the filiform bougie, patiently and systematically essayed. He purchases his whalebone from J. F. Tobin, 82 Duane Street, N. Y., at about two dollars a gross. Each piece will make two bougies. In preparing them he first cuts off the end transversely so as to get rid of any tendency to split. He then rounds the end by rubbing it lightly on a sheet of emery paper gummed upon a board. He then makes the extremity bulb-shaped. He was told that the bulb is usually produced by the action of a file. He makes the bulb extremity by placing the end of the whalebone in a groove on the board and shaves or scrapes it from the end with a very sharp knife. He then shaves down the shank and neck in like manner in the opposite direction, until he has formed a conical neck from three to four inches long, and of almost capillary thickness as it approaches the bulb. The shape of the bulbar ends demands some dexterity in handling the knife, and to insure accuracy he does this under a lens of low power. As the filiform whalebone bougie is the guide upon or over which metallic instruments are to be passed, each one should be carefully fitted. This can be done by frequently passing it upward and downward through the tunnelled perforation in the beak or extremity of each and every instrument, in conjunction with which it may in future be used.

In endeavoring to pass a stricture he makes the first attempt with a single whalebone; if it passes, well and good. If it does not go through, he follows it with others, perhaps five or six, until the follicles or folds of the mucous membrane near the stricture are occupied. Then by patiently essaying the inserted filiforms, he almost always succeeds in getting beyond the stricture at the first sitting. There is a caution to be observed as to the time of making use of filiform instruments. Their application, in cases of tight stricture, should be primary—that is, one cannot expect to succeed with them if they have been preceded on the same day by the attempted introduction of round-ended instruments, the tendency of which undoubtedly is to obscure or close in some way the narrow opening of a resisting stricture, and thus to render its detection more than usually difficult. He always uses the straight filiform. The whalebone, when once introduced, serves as a guide to the metallic catheter, or stretching instrument. This may be the tunnelled catheter, or any of the various forms of dilators or divulsors; preferably, he thinks, that of Sir Henry Thompson, followed by the powerful and most efficient instrument designed by Prof. S. W. Gross, and which registers from 16 to 40 of the French scale.

In using metallic instruments in conjunction with the filiforms, there is one point to which attention has not been directed. We are ordinarily told to slide the metallic instrument over the whalebone through the stricture into the bladder; in so doing, the whalebone may be cut at the seat of stricture. He avoids this accident in this manner: Having passed the whalebone into the bladder, he carries the metallic instrument—threaded on this, as it were—down until he reaches the stricture, the point of resistance. He then ceases to push the metallic instrument along the filiform, but slightly withdrawing the latter to gain a little by the conicity, he grasps both instruments between his thumb and finger, and gently carries them on together. In this way he is almost certain to pass the resisting point, and, if the stricture be single, to reach the bladder.

In employing the stretching instrument he usually separates the blades as far as No. 30 or No. 35 of the French scale, and on its withdrawal, introduces a steel bougie of about the same calibre, to see that all is right, and that the urethra is clear. The bougie is then removed, and is not reintroduced until the third or fourth day. The after-treatment consists in the hypodermatic use of morphia, full doses of quinine, and in a milk diet.

In retention dependent upon tight and irritable stricture, not readily overcome by the catheter, he has often succeeded by simply passing a whalebone into the bladder and leaving it *in situ*. The urine will readily pass along the filiform by capillary action, and the steady dribbling thus established will in a short time empty the bladder. The presence of the whalebone serves also to render the stricture less tight, and so facilitates the after-passage of metallic instruments should their use be considered desirable.

DR. S. W. GROSS said that the younger members of the profession, who are not accustomed to the use of filiform bougies, should not put too much confidence in them, as they do not always pass with readiness through a small stricture, or even through a large one. He differed from the speaker in regard to the usefulness of the twisted bougies. In the great majority of strictures, the orifice is eccentric. A twisted bougie will often pass after straight one has failed, although the urethra has been packed with them. In strictures not the result of traumatism, the obstruction does not arise from the organic stricture itself. A man may have been suffering with stricture for some time, and the calibre of the urethra have been gradually narrowing until the stream of urine becomes very small. In this condition he exposes himself to cold and wet, and in the course of a few hours is unable to pass urine. In such a case the obstruction is not due directly to the organic stricture, but there is superadded spasm of the muscles of the urethra, and it is spasm which we have to overcome rather than the contraction itself. In such a case, the patient being under the influence of an anæsthetic, he carries a medium sized instrument—say one whose shaft measures No. 16 and whose point is No. 13 of the French scale—down to the stricture, supporting, if necessary, the curve of the instrument with the finger

on the perineum or in the rectum. In the majority of cases gentle pressure for a few minutes will enable the instrument to pass into the bladder. He has succeeded in this way in cases where he had failed to introduce a filiform bougie.

The instrument to which Dr. Brinton has referred, he had made more particularly for the purpose for which he uses it. At the time that he invented it, he was a rather firm believer in the treatment of stricture by divulsion. He does not employ this method now, although he would use it in a case of retention of urine. It is no more dangerous than cutting, and cutting is no more dangerous than divulsion, but internal incision can be more accurately limited than divulsion. With the latter method we tear not only the stricture, but also the mucous membrane at some distance in front of and behind it. In a specimen in his possession where divulsion was employed, there were no less than nine rents in the mucous membrane, and the rent in the stricture was oblique and had not gone completely through it. This method will do in superficial strictures, but in hard fibrous strictures we have to supplement this operation with urethrotomy. It is for this reason that he has given up divulsion for internal urethrotomy, and he does not resort to this latter operation so frequently as he formerly did. When the patient is within convenient distance, he much prefers in ordinary cases of inflammatory stricture, and in recent cases more particularly, to resort to gradual dilatation. He has reached the firm conviction that the cases in which a radical cure is produced by divulsion, internal incision, or external incision, are so rare that it is seldom worth while to resort to these operations.

DR. CHARLES B. NANCREDE said that when he intends to do any radical operation, he prefers incision, for then he knows exactly what he is doing. Filiform bougies are not always easily passed through a stricture, even when it is of comparatively large size. Where he has failed to pass the filiform bougie, he has frequently succeeded with a metallic instrument of fair size.

DR. BRINTON said that the remarks which have been made only show that every surgeon operates according to the habit of his own mind and hand. While he does not claim that the method which he has described is better than that of others, he can only say that it is one which he has followed for many years, which has yielded him great success in the past, and to which he looks forward with confidence in the future.

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, January 4, 1887.

THE PRESIDENT, C. L. DANA, M.D., IN THE CHAIR.

DR. PUTNAM JACOBI read a

NOTE ON APHASIA WITH REFERENCE TO LOSS OF NOUNS.

Seventeen cases out of a total of 116 analyzed offered this peculiarity, which has not failed to attract the notice of authors. Several explanations have been offered, none of which seemed to the writer completely satisfactory. Anatomical data are not at present sufficient to throw much light on the matter further than to demonstrate that the symptom is probably always associated with diffuse, and not with focal, lesions. These lesions cannot fail to lie on the sensory side of the speech mechanism, and for reasons detailed at length in the paper must especially involve the paths between the auditory and visual centres, through which the auditory impression or sign of the object became habitually associated with the visual impressions. The writer maintained that the act of speech always involves an entire proposition, framed in the suprasensory concept centres (probably the superadded convolutions of Broadbent). This proposition constituted a verbal conglomerate, a unity to the mind expressing it, whatever the number of separate parts into which it might be broken up. Such actual verbal conglomerates remain in many primitive languages, as that of the Greenlanders and North American Indians, where entire sentences are often inflected like a single noun or verb. In our languages the conglomerate or proposition to be expressed is composed of the reminiscences of auditory signs which have become fused with similar reminiscences of visual impressions of things and their relations. If the visuo-auditory paths are interrupted the signs or names of things will be dislocated from their habitual association with the other characters of such things, while the visual impressions themselves remain, and enter directly into the verbal conglomerate. All other parts of speech than nouns, expressing complete intellectual relations, and although remotely connected with impressions registered in the visual centre, are immediately associated only with the processes and registrations of the suprasensory or intellectual centres. While these are intact, therefore, and unless focal lesions have altogether obliterated the memory of language, the speech of relations will be remembered and revived in expression. The objects which are involved in the relations of the conglomerate proposition will no longer be revived in consciousness by their names, but by means of their visual impressions only. These can be expressed by gestures, mimicry, or periphrases, the loss of the auditory sign is thus compensated.

DR. H. D. CHAPIN read a paper on

PERIPHERAL NEURITIS AND THE PAINFUL PARALYSES OF EARLY LIFE.

He said there had been great scarcity of autopsies in comparison to the frequency of paralyses in children. For that reason a very careful clinical study was necessary, interpreted in the later knowledge of anatomy and physiology of the central and peripheral nerves. The writer had met an atrophic form of paralysis differing at its inception, development, and result, from the spinal paralyses with which he was familiar. Most of the autopsies had been made many years after the paralysis, when death had taken place from some other cause. There having been but few autopsies in proportion to the number and variety of cases of paralysis, there seemed rather a slender basis for the theory of exclusive spinal paralysis of childhood. Laborde's case is mentioned where a tabetic neuritis existed with sclerosis of the antero-lateral horns, while the ganglion cells were found normal. Robin's case was cited where no lesion of the cord was discovered. Such a case would show that paralysis is not necessarily always spinal. Barwell's theory was incidentally mentioned. He claimed that infantile paralysis is purely peripheral,

involving the ultimate fibrillæ of the nerves among the muscular elements. Later Leiden advanced a more rational explanation when he considered that in atrophic paralysis there may be neuritis with spinal cord lesion, and that, instead of such forms of paralysis always originating in the spinal cord, they may have their beginning in any part of the motor apparatus, then spreading to other parts or remaining limited to the part first affected. Leiden claims that where complete recovery takes place, the morbid processes always remain peripheric. Leiden's theory is accepted by the author of the paper as affording satisfactory explanation for certain cases that he has observed clinically. The histories of three cases were given in which paralysis was gradual at the onset, and attended by great and persistent pain. Pain was one of the most marked symptoms, and principally at the extremities—legs and feet. Most of these cases lasted several months, and then, to the surprise of the writer, slowly recovered. Atrophy was present. One of the cases appeared strongly rheumatic; in the other two the cause was uncertain. Malarial poisoning appeared to be able to produce a more or less severe form of multiple neuritis resulting in paralysis. The history of a mild case was given which recovered under quinine.

Several cases were related in which children with malarial fever were seized with painful paralysis, lasting in one case over four months, followed by recovery. A possible explanation of pain is that it is due to the marked general congestion of the gray matter of the spinal cord. The author stated that in his cases, and others like them, there were no other symptoms showing irritation in the deeper parts of the cord. The general congestion or myelitis should cause bladder symptoms, bed sores, and other disturbances. Histories of two cases of lead paralysis in young children seen by the author were given. The lesions were regarded as largely peripheric. Cold usually attacks by preference the peripheric system of nerves. The loss of power sometimes following rheumatism is also probably of this nature. Any morbid blood condition appears able to produce a peripheral paralysis in early life, particularly the acute infectious diseases, especially diphtheria. The lesion in diphtheria is now known to be largely peripheric.

The object of the paper is suggestive, not dogmatic. The author has gladly availed himself of recent studies in peripheral neuritis tending to throw light upon some of the paralyses of children which have caused much perplexity. The great differences in the clinical behavior of paralyses in early life, in duration and curability, must admit of different anatomical and pathological explanations.

Dr. M. ALLAN STARR did not know of any recorded case in a patient under twenty-four years of age in which a lesion of a peripheral nerve had been found at autopsy which would account for the paralysis; and while there was great probability in the statements made by the author, they yet lacked confirmation by autopsy. The points had been brought out very well with regard to the distinctions between peripheral neuritis and anterior poliomyelitis, but he would take exception to what had been said regarding the rapidity of the onset. There were many cases of acute onset of peripheral neuritis, the patient having fever and chill, and the limbs within twenty-four hours becoming entirely immovable. Too much attention could not be given to the usually great tenderness in the muscles and nerves in multiple neuritis.

DR. RUDISCH said that he was the first to observe, as long ago as eight or nine years, a form of polioneuritis leading to paralysis and atrophy, and which followed affections of the joint, often so-called rheumatic affections. We now saw often enough an affection of one or more joints with inflammation, followed after awhile by paralysis, usually curable.

DR. FISHER said a girl, thirteen or fourteen years of age, was brought to the dispensary with the history that one morning, after taking cold, she woke up with paralysis of the upper and lower extremities. At that time she had only paralysis in one leg, which he supposed, without thought of neuritis, to be ordinary poliomyelitis. Rapid improvement took place, and she recovered within six weeks, and the minister who brought her reported the case as one cured by faith. Dr. Fisher was unable to say whether the case was an affection of the anterior cornua or one of multiple neuritis.

DR. SACHS thought we should not be influenced too much by the present fashion, and call all, or most, of the cases formerly regarded as poliomyelitis cases of multiple neuritis. Referring to one of the cases related in the paper, and the symptom of pain, he said too much stress should not be laid upon it unless it was severe, persistent, and located distinctly along the tract of a peripheral nerve.

DR. LESZYNSKY regarded pain as a prominent symptom of neuritis, absent in the majority or all of the cases of simple poliomyelitis. The pains present in some of Dr. Chapin's cases reminded him of the pain from straining the tendons of the extensor muscles which had been for some time in a paralyzed state.

DR. CHAPIN thought that a neuritis would occasionally explain cases which could not be accounted for on the supposition of a spinal lesion, and he would rather say halt! to the universal spinal cause of disease. With regard to pain, it is difficult to locate it along a particular nerve in children, but in his cases it was acute and persistent, and not due simply to stretching of tendons.

CORRESPONDENCE.

THE MEDICAL SIGNERS OF THE DECLARATION OF INDEPENDENCE.

To the Editor of THE MEDICAL NEWS,

SIR: *The Boston Medical and Surgical Journal* makes the following remarks on a portion of my Centennial Address:

"The statement in the recent address of the President of the College of Physicians of Philadelphia, that Rush 'was the only physician whose name is on that energetic arraignment of the Crown' (the Declaration of Independence) should not pass unchallenged. Josiah Bartlett, of New Hampshire, and Lyman Hall, of Georgia, were successful practising physicians; Oliver Wolcott, of Connecticut, studied for the profession."

My critic might have added Matthew Thornton's name to his list. My answer to the friendly challenge is this:

Josiah Bartlett is said by Sanderson and Thacher to

have studied medicine with Dr. Ordway, of Amesbury, Mass., and completed his education in 1750. Certainly, then, at no school of medicine. He became a statesman and judge, but ceased to practise medicine.

Lyman Hall, born in Connecticut about 1731, is said by Sanderson to have attained a proper knowledge of medicine at an early period of life. He moved to Georgia in 1752. It seems certain that he owed his title of doctor solely to the fact that he studied with a practitioner of physic. He, too, was not a graduate, and he, too, gave up his career in medicine for politics, and was finally Governor of Georgia.

Oliver Wolcott began to study medicine, but never pursued it and never practised it. We may leave him out of the question.

Matthew Thornton was born in Ireland about 1714. He studied with Dr. Grant, of Leicester, Mass., and practised in Londonderry, New Hampshire. Of Thornton, Thacher conjoins this statement, quoting N. H. Hist. Coll.[1] Thornton seems never to have obtained a diploma, and he, too, may therefore be classed as only a practitioner of medicine; nor can I discover that he pursued a medical career after going to Congress.

None of these men were graduates in medicine, none of them would now be classed by us as physicians, in the higher sense in which we apply the term. Rush, on the contrary, was a graduate of Edinburgh, and never gave up the pursuit of medicine. He alone, of those named, was a titular M.D.

Yours truly, S. WEIR MITCHELL.

PHILADELPHIA, January 25, 1887.

INFLUENCE OF THE CHARLESTON EARTHQUAKES ON HEALTH.

To the Editor of THE MEDICAL NEWS,

SIR: In my recent paper on the effects upon health produced by the earthquake shocks in Charleston, my principal object was to collect, record, and preserve a succinct account of all the phenomena observed.

Among the most striking of these—noticed by numberless persons—were sundry sensations closely resembling those ordinarily produced by the shocks of electro-magnetic batteries, viz., pricking sensations, "needles and pins," feelings beginning in the fingers and toes and extending up the arms and legs. Many of these occurred in adult *males*, and in children of both sexes, too young for any "hysteroidal" element to prevail. I do not think that all these sensations should be ascribed to fear, or to purely nervous disturbances; for similar results have not always been observed in the numerous instances where large numbers of people have been exposed to sudden danger, as in war, accidents, burning or falling buildings, etc.

There had been marked absence of electrical disturbance, rains, or storms, for months preceding the earthquake.

My respected colleague, Professor Guitéras, in his friendly comments on that part of my paper, differs as to the explanation, and he makes apparently a strong point in claiming that there was no sensible disturbance of the electrical batteries in this city.

This may be true, as I am likewise informed; but even without the intervention of an earthquake the atmosphere is sometimes highly charged with electricity, but not in sufficient amount to produce the effects recently observed. My object was to give in a philosophical spirit the natural history of the catastrophe, and cite all its results, whether or not the true explanation was afforded, upon which men will differ.

One of the young ladies engaged in the telephone office in this city, who was in Savannah during the great shock, informs me that she experienced decided electrical disturbances in every way resembling those from an electrical battery.

A word with regard to an article by Surgeon Carter, of the U. S. Army, recently published in your columns.

I was much gratified by the record of his observations respecting the use of a prescription advised by me for the prevention and treatment of diphtheria, though disappointed to find that in the adobes of the Gila River, which were crowded with Mexicans, who lived under very poor hygienic conditions, the prescription failed to prevent the disease.

Dr. Carter states that he derived special benefit also from the bichloride of mercury. I, also, in my original communication to THE NEWS, advised the combined use of the bichloride where the poison was concentrated, and the danger of infection very great.

F. PEYRE PORCHER, M.D.

CHARLESTON, January 20, 1887.

[1] Sanderson's Lives of the Signers. (By Robert Waln.)

NEWS ITEMS.

PARIS.

(From our Special Correspondent.)

ANTISEPTIC HYPODERMATIC INJECTIONS IN BACTERIAN MALADIES.—Many diseases are caused by microbes, and as every microbe has its known microbicide, it becomes necessary to know how to employ the latter in subcutaneous injections. M. MEUNIER believes that he has discovered a medium through which all the microbicides that are not dangerous to the economy may be injected hypodermatically without causing either swelling, abscesses, or pain. This medium is pure vaseline (density, 0.820), which dissolves thymol, menthol, the essences of eucalyptus, cubebs, santal, copaiba, mint, and of cinnamon—in a word, all the hydrocarbons whose formula is $C^{2n}H^{2n-4}$, and $C^{2n}H^{n}$; and also carbolic acid, camphor, chloride of camphor, creasote, sulphide of carbon, iodoform in solution in the essences, and even alkaloids, such as cocaine, digitaline, etc. Many microbicides, antiseptics, and medicines may, therefore, be employed subcutaneously which are not easily digested and absorbed by the gastro-intestinal tube, and in this way accurate dosing of the active principle may be obtained. The following are the general formulæ which M. Meunier proposes to employ in subcutaneous injections:

Essence of eucalyptus . . .	5 parts.
Vaseline, chemically pure (D. 0.820)	20 "

Each Pravaz syringe contains twenty centigrammes of eucalyptol. The mixture should be well shaken, allowed to repose, and filtered through three papers. The solution will then be found to be clear and limpid. Prepare in the same way the solution of the essences

whose formula is $C^{2n}H^{2n-4}$—that is to say, the essences of cubebs, thyme, santal, copaiba, mint, etc. These essences may be associated, taking care that the proportion of the essence to the vaseline is 1 to 5, in order to avoid pain and swelling.

Eucalyptol	5 parts.
Iodoform	0.25 part.
Vaseline	20 parts.

Dissolve the finely powdered iodoform in the essence; add the vaseline, agitate, and filter through three papers. Each Pravaz syringeful contains twenty centigrammes of eucalyptol and one centigramme of iodoform.

Sulphide of carbon	1 part.
Vaseline	15 parts.

Mix and filter as above.

Clinical observations will indicate the number and the quantity of the injections to be employed in different maladies. M. Meunier concludes that, with vaseline as a vehicle, injections of the non-toxic microbicides may be made in the subcutaneous connective tissue, and probably in all the other tissues, without inflammation, reaction, or pain, and thus arrest the evolution of microbes; and that the dose may easily be determined for each tissue according to toleration. In the numerous experiments with these injections, M. Meunier met with only one simple inflammatory reaction without suppuration, even with extreme doses.

STATE BOARD OF HEALTH AND CHARITIES OF NEW YORK.—Governor Hill, in his annual message to the Legislature, has again recommended the abolition of the State Board of Health and the State Board of Charities, and the concentration of the honors of these bodies under single heads.

OFFICERS OF THE NEW YORK COUNTY MEDICAL ASSOCIATION.—The annual meeeting of the New York County Medical Association was held at the Carnegie Laboratory, January 17th, when the following officers were elected:

President.—Dr. John Shrady.

Vice-President.—Dr. J. R. McGregor.

Recording Secretary.—Dr. P. Brynberg Porter.

Corresponding and Statistical Secretary.—Dr. Glover C. Arnold.

Treasurer.—Dr. Charles Ellery Denison.

OBSTETRICAL SOCIETY OF BOSTON.—At the twenty-sixth annual meeting of the Obstetrical Society of Boston, held January 8, 1887, the following officers were elected for the ensuing year: *President*, Dr. William L. Richardson; *Vice-Presidents*, Dr. O. W. Doe, Dr. John Homans; *Treasurer*, Dr. E. J. Forster; *Recording Secretary*, Dr. C. M. Green; *Corresponding Secretary*, Dr. J. Stedman; *Prudential Committee*, Dr. William Ingalls, Dr. J. G. Blake, Dr. F. W. Draper, Dr. J. W. Elliott, Dr. C. M. Green, *ex officio; Publishing Committee*, Dr. Alfred Hosmer, Dr. J. R. Chadwick, Dr. C. E. Stedman. Dr. W. W. Wellington, of Cambridge, was elected an honorary member.

DEATH OF THE "LIVING SKELETON."—The "Living Skeleton," pleasantly and familiarly known to some of the attendants at Dr. Holmes's anatomical lectures, has at last become a dead skeleton. Mr. Sprague, the individual in question, has just died, at the age of forty-six, and the weight of forty pounds. He has bequeathed his remains to the Harvard Medical School, and it is to be hoped we shall soon know what was the missing link in his assimilative system. The deceased was personally inclined, as we remember, after considerable association with admiring medical men throughout the country, to attribute his difficulty to atrophy of the thoracic duct.—*Boston Medical and Surgical Journal*, January 13, 1887.

WOMEN AS SANITARY INSPECTORS.—A petition with one hundred signatures has been presented to the New York Health Board asking the appointment of six women on the corps of sanitary inspectors.

A MORE HUMANE MODE OF EXECUTING THE DEATH PENALTY.—There has been considerable discussion on this point, of more or less merit of late, in both the lay and scientific journals. There can be no doubt that the present mode of hanging is alike barbarous and discreditable to modern ingenuity. With the present extraordinary progress in electro-mechanics, there is evidently no reason why electricity should not be employed for the purpose. The dynamo-machine would appear to meet every theoretic and practical indication. When thus employed, death would be instantaneous, and entirely devoid of those revolting features which have so long disgraced the present methods.—*New York Med. Monthly*, January, 1887.

CREMATION IN NEW YORK.—Although the New York Cremation Society owns a fine crematory, it has been used but infrequently, the bodies of only two members of the Society having been incinerated during the past year.

THE COLLEGE OF PHYSICIANS AND SURGEONS OF NEW YORK.—The building and lot on the corner of Twenty-third Street and Fourth Avenue belonging to the College are said to have been sold for the sum of $160,000. Possession is to be given the purchaser in September next, if the new college building on Tenth Avenue is completed by that time.

ASYLUM FOR INEBRIATES AT MILAN. — The first Asylum for Inebriates has just been opened near Milan, Italy. It is intended for the better class, who can pay for the best medical care and surroundings. In all the hospitals for insane, wards are set apart for inebriates, and their treatment, as partially insane, has been carried on successfully for many years, but this is the first organized effort to treat them in a separate hospital.

THE LACAZE PRIZE.—The great Lacaze prize of 10,000 francs, which is awarded every four years for the best work on the treatment of fevers, typhoid in particular, has just been given to Dr. Albert Robin for his work called "Leçons de Clinique et de Thérapeutique Médicales." M. Robin is one of the professeurs agrégés at the Faculty, and a relative of the late Professor Robin.

THE RUSSIANS are not in all respects a nation to be imitated, but there are some things we might learn even

from them. For instance, a Russian doctor who fails to attend a patient when called upon to do so, commits a legal offense, the punishment for which is a fine varying from 5 to 100 rubles, or, in case of gravity, a term of three months' imprisonment. This is a much better means of keeping a medical man up to the mark, where the patient is not a "paying" one, than the remote prospect of an inquest before a medical coroner. I observe, too, that in Russia medical fees are regulated by law, which is also not a bad idea.—*London Truth.*

POISONED BY A COBRA.—The *Morning Star* of Jaffna, in Ceylon, reports the death of the taxidermist of the Victoria Museum in that town from the bite of a cobra, under curious circumstances. While feeding a cobra, which he thought was harmless from previous extraction of the poison bag, it suddenly bit his hand. For a few minutes he took no notice, thinking the bite harmless, but pain and nausea soon began. Carbolic acid was applied, ligatures were bound round the arm, an incision was made at the bite, and the blood of the arm was wholly removed. Various antidotes were used, but the unfortunate man lost the power of speech, and soon after every muscle seemed to have become paralyzed, and breathing entirely ceased. Artificial respiration was, therefore, resorted to, and this operation was unceasingly continued for nine hours, when at last the patient made an attempt to breathe, and soon regained consciousness enough to make his wants known. He steadily improved until the Friday, the accident having taken place on a Wednesday, and then astonished those around him by stating that during the severe operation of Wednesday night he was conscious of all that was taking place, but was unable to make his feelings known, not having power over a single muscle. It would seem that the poison paralyzed the nerves of motion, but not those of feeling, for he could see and hear and feel, although the physician, even by touching the eyeball, could get no response either of feeling or consciousness. His partial recovery was, however, followed by a high fever and inflammation of the lungs, and he died, perfectly conscious, on following Sunday.

PREVENTIVE INOCULATIONS IN HYDROPHOBIA IN VIENNA.—Dr. Ullmann, assistant of Professor Albert, who has spent some weeks in Paris, studying Pasteur's method of preventive inoculations for hydrophobia, has recently established in Vienna a station for preventive inoculations. From June 28th till now eighty-five persons bitten by rabid animals were inoculated with the best success. The rabid condition of the animals by which the patients had been attacked was stated in all these cases. According to the reports received, all the patients are in good health.

UNMUZZLED DOGS IN LONDON.—The metropolitan police order for the muzzling of dogs, which came into force December 10, 1885, was last week withdrawn. That it has been extremely beneficial in its operation is shown by the fact that whereas in the first week of its enforcement there were recorded 46 cases of rabies, and 1 death; in January the number of cases fell to 27, and 1 death; in February there were 14 cases, and no deaths. The number of rabid dogs found in the streets since this order has been in force has also sensibly diminished. In July the number was 16, in August 13, September 9, October 4, and in November about 12. During 1885, there were no fewer than 373 cases of rabies reported to the metropolitan police, and 26 deaths occurred in London alone.

THE LATE JOHN P. GRAY, M.D.—The members of the Council of the New York State Medical Association, while humbly submitting to the decrees of Providence, realize with much grief that the year now closing is made notably sad in the loss by death of so many of their Fellows whose labors have largely contributed to the honor, dignity, and usefulness of the medical profession.

They now mourn the loss of the second president, Dr. JOHN PURDUE GRAY, whose aid, wise councils, and personal work, have been of such signal service.

In common with all the Fellows of the Association, and with the medical profession at large, they sorrow for the death of one who had rendered himself so useful to the State in the guidance of the charitable work in the department of medicine, in which he had become a shining light.

The Council, therefore, resolved that the above be published in the forthcoming volume of the *Transactions* of the Association, and in the medical journals, and that a copy thereof be transmitted to the family of the deceased.

E. D. FERGUSON,
Secretary.

NOTES AND QUERIES.

PHYSICIANS WHO SIGNED THE DECLARATION OF INDEPENDENCE.

To the Editor of THE MEDICAL NEWS,

SIR: Dr. S. Weir Mitchell, in his Commemorative Address (THE MEDICAL NEWS, Jan. 8, 1887), is quoted as saying of Dr. Benjamin Rush: "When timid men fell out of the Continental Congress, he was elected to that body, that he might sign the Declaration of Independence, and was the only physician whose name is on that energetic arraignment of the crown." Three other signers of that declaration are said to have been physicians, viz., Dr. Josiah Bartlett, of New Hampshire; Dr. Matthew Thornton, of the same province, who served with distinction at the seige of Louisburg, 1745, as a surgeon; and Dr. Lyman Hall, of Georgia.

Dr. Rush was probably the greatest of them all, but these were good men and true, and should not be forgotten.

Yours, JOSEPH SHARP.

KANSAS CITY, MD., Jan. 16, 1887.

CORRIGENDA.

Page 85, second column, second line from bottom, *insert after* "ankylosis," "must be extremely rare. The only examples."

Page 88, second column, nineteenth line, *for* "unfortunate," *read* "important."

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JANUARY 18 TO JANUARY 24, 1887.

FORWOOD, W. H., *Major and Surgeon.*—Ordered for duty at Fort Meade, Dakota Territory.—*S. O. 5, Department of Dakota,* January 14, 1887.

POPE, B. F., *Major and Surgeon.*—Ordered for duty at Fort Clark, Texas.—*S. O. 15, A. G. O.*, January 19, 1887.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

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Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

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